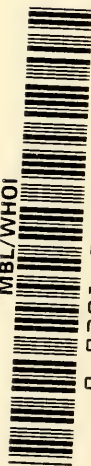
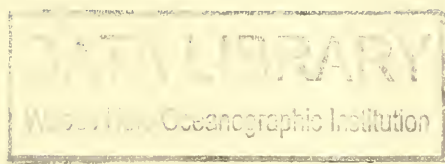


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U. S. TREASURY DEPARTMENT - - - COAST GUARD

BULLETIN No. 37

INTERNATIONAL ICE OBSERVATION
AND ICE PATROL SERVICE IN THE
NORTH ATLANTIC OCEAN-[^{SEASON of}
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U. S. TREASURY DEPARTMENT
COAST GUARD

Bulletin No. 37

INTERNATIONAL
ICE OBSERVATION AND ICE PATROL
SERVICE

IN THE
NORTH ATLANTIC OCEAN



P. S. BRANSON
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SAM PISICCHIO
FLOYD M. SOULE



CG-188-6

Season of 1951

UNITED STATES
GOVERNMENT PRINTING OFFICE
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UNITED STATES COAST GUARD



WASHINGTON, D. C., 22 May 1952.

Transmitted herewith is Bulletin No. 37, International Ice Observation and Ice Patrol Service in the North Atlantic Ocean—Season of 1951.

A handwritten signature in cursive script, reading "Merlin O'Neill".

MERLIN O'NEILL,
Vice Admiral, U. S. Coast Guard
Commandant.

Dist. (SDL No. 49)

- A: a, aa, b, c, d, dd, e, f (SORREL, LAUREL, COWSLIP, EVERGREEN, CACTUS only), i (1)
- B: e (5); b, c (2); d, g, l, m (1)
- C: a, b, d (1)
- D: h (5); c, e (1)
- E: d (5)
- List 133

ABSTRACT

The major features of the 1951 season were: (1) The early recession of the southern limits and destruction of field ice due chiefly to easterly gales, and (2) the unusual lack of icebergs. A total of six bergs is estimated to have drifted south of the 48th parallel (50-year average is 433 bergs annually); three drifted south of $47^{\circ}00'$ N., and none were observed to cross south of latitude $46^{\circ}00'$ N. Although records indicate that in the years 1940 and 1941 only two bergs were reported south of latitude $48^{\circ}00'$ N., the services of ice patrol for these years were conducted with reduced forces and without the benefit of aerial ice observation, and it is conceivable that both of these years were more productive than the data indicated. In 1951, aerial searches were conducted as far north as latitude $60^{\circ}00'$ N. The sparsity of bergs was exceptional. Because of the lag of about three years between the production of bergs and their journey to the Grand Banks area and the lack of any post-season ice observation census in Baffin Bay since 1949, it is difficult to speculate what forces were responsible for the absence of ice.

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FOREWORD

The activities of the International Ice Patrol for the 1951 season are presented herein. This bulletin adheres to the same general pattern established in previous years except that the "Table of Ice Reports" returns to the former practice of listing all ice reports chronologically without regard to whether the particular report was north or south of any particular latitude. Similarly, the monthly digest of ice conditions incorporates all significant ice information in all latitudes. Obstructions other than ice, such as drifting buoys, derelicts, etc., have not been included in the "Table of Ice Reports" since their significance therein is doubtful.

The oceanographic section was prepared by Oceanographer Floyd M. Soule, Lt. P. S. Branson and Lt. (jg) R. P. Dinsmore. Lt. (jg) Sam Pisicchio, U. S. C. G., prepared the sections pertaining to the conduct of the International Ice Patrol.

INTERNATIONAL ICE PATROL, 1951

In 1951, Capt. Garrett Van A. Graves, U. S. C. G., was Commander, International Ice Patrol. Commander David W. Sinclair, U. S. C. G., was the senior aviator in charge of ice patrol aircraft and Lt. (jg) Sam Pisicchio, U. S. C. G., served in the capacity of Ice Patrol Officer. Forces assigned were two PB1G flying fortresses; one oceanographic vessel, the U. S. C. G. C. *Evergreen*; and two ice patrol vessels, the cutters *Acushnet* and *Androscoggin*. Due to the lack of ice, the *Acushnet* and *Androscoggin* remained on stand-by status at their home ports during late winter and were released outright when it became evident that their services would not be required during the 1951 season. The ice patrol staff and office, including Coast Guard Radio Station Argentia (NIK) were based at Argentia, Newfoundland. This was the hub for the collection, evaluation, and dissemination of ice information received from all sources.

The ice patrol season, which began with the arrival of the first PB1G at Argentia on February 14, and ended on May 24, was one of the shortest in history. Regular ice messages to the U. S. Hydrographic Office, Washington, were commenced on March 6; scheduled ice broadcasts from Coast Guard Radio Argentia (NIK) to shipping were inaugurated on March 13 and all ships traversing the ice patrol area were requested to furnish sea water temperatures and weather conditions to NIK every 4 hours along with any ice sighted. It is pointed out that the commencement of these regular ice broadcasts was not dictated by the existing ice conditions which in no way threatened the trans-Atlantic steamer lanes. Commander, International Ice Patrol, did feel, however, that even though the information reported was generally negative, it would reduce the requests for special information which had already begun to assume considerable proportions.

At no time during the season did there exist even a remote threat to the established steamer tracks and in early April, Commander, International Ice Patrol submitted a recommendation to the North Atlantic Track Agreement Authority that shipping remain on track C instead of effecting the scheduled seasonal shift to track B on April 11. No action was taken on this recommendation.

As a result of aerial scouting on May 2, track G via the Strait of Belle Isle was considered navigable and open to shipping. This

development was disseminated to maritime interests via the ice broadcasts. It is significant that the navigability of the strait at such an early date is almost without precedent.

The absence of the ice patrol cutters from participation in the season's activities plus the rotation of one PB1G aircraft between Argentina and its home base helped keep operating expenses of ice patrol to a minimum.

The oceanographic program was conducted, as in recent years, by the Coast Guard Cutter *Evergreen*. Three oceanographic cruises and one post-season cruise were made and are discussed in detail elsewhere in the bulletin.

AERIAL ICE RECONNAISSANCE

The entire ice observation service was conducted by two winterized PB1G (converted B-17) aircraft without support from the ice patrol cutters. As already mentioned, the absence of any threat to the established shipping lanes permitted a rotation of aircraft between Argentina, Newfoundland, and the home base of Elizabeth City, N. C. Flight plans were usually about 1,200 miles in length (8 hours) with flight lines 25 miles apart. It was rare, even under the most ideal weather conditions, to find the entire search area free from fog so that it was necessary to rely on a radar search whenever visibility was restricted. Loran, with readings taken every 3 minutes, was the most effective tool at the navigator's disposal which, with the aid of celestial navigation, made it possible to pinpoint continuous fixes, the maximum error rarely being more than a few miles. A trained ice observer, responsible for defining and plotting all ice sighted, was carried on each flight. Since there was little ice of any consequence south of latitude $50^{\circ}00' \text{ N.}$, most of the 27 flights were conducted between latitudes $50^{\circ}00' \text{ N.}$ and $55^{\circ}00' \text{ N.}$, and several flights searched along the Labrador Coast as far north as $60^{\circ}00' \text{ N.}$ The total hours in flight for both aircraft was 198.2 hours, cruising 29,808 miles and searching 600,790 square miles. The average duration of a flight was 7.3 hours, although individual flights ranged from 2.5 hours to 10.5 hours. Only 139 bergs were sighted. A policy of waiting for favorable weather before dispatching a flight contributed to the efficiency of each flight and made for good visual effectiveness. Flights were made about twice a week, the greatest interval between flights after the formal inauguration of ice patrol services being 7 days.

COMMUNICATIONS

Since the success or failure of an ice observation service is directly dependent on the efficiency of the communications tech-

niques employed, it has been the constant aim of the International Ice Patrol to improve and perfect all phases of the communications involved. In 1950, many agencies responded to our long standing request to make criticisms and suggestions for improving the communication procedures, and the United States Coast Guard was able to incorporate most of these recommendations in the communication plan for the 1951 ice patrol season. Some of the more important changes and progressive measures adopted were:

- (1) Relocation of Coast Guard Radio Argentina receivers to a new site to eliminate the blocking previously caused by the proximity of transmitting antennae.
- (2) Changes in times of broadcasts to reduce interference with Navy Radio, Washington (NSS), and Canadian Radio, Halifax, N.S. (CFH) schedules.
- (3) Introduction of new frequencies for ice broadcasts to eliminate the interference and skipping encountered in frequencies previously used.
- (4) Simultaneous transmissions of both morning and evening ice broadcasts on all three frequencies to eliminate areas of "skip" and give continuous coverage from the station to extreme range.
- (5) Increased power output of transmitters.
- (6) Adoption of 468 kilocycles as an alternate working frequency when 480 kilocycles is not readable.

In 1951 the daily schedule of ice broadcasts to shipping was commenced on March 13 and continued until the termination of the ice season May 18. Each broadcast was preceded by the general call to all ships (CQ) on 500 kilocycles after which the transmitting station, NIK, announced the ice bulletin with the operating signal to shift to 155, 5,320, and 8,425 kilocycles. After shifting to these frequencies, there followed a 30-second delay to permit shipboard operators to tune their receivers. The ice bulletin was then broadcast twice on an automatic keying device with a controlled timer, the first transmission being made at 15 words per minute and the second transmission at 25 words per minute with a 2-minute interval between transmissions. Broadcast times were at 0048 G.C.T. and 1248 G.C.T., with simultaneous transmissions on 155, 5,320, and 8,425 kilocycles. The pattern of the ice bulletin remained more or less unchanged throughout the season. The preamble consisted of a definition of the extreme outer limits of both field ice and icebergs, after which followed a chronological 7-day résumé of ice conditions, the most recent information being listed first. The usual distinction was made between ice sighted by units of the International Ice Patrol, i.e., ice patrol aircraft

or the oceanographic vessel, and that sighted by other units. The former was listed as ice *sighted* and the latter as ice *reported*.

Reports of sea water temperatures, weather and ice reports were solicited from merchant vessels with the commencement of the daily broadcasts of the ice bulletin. A tabulation of reports received for the entire season is as follows:

Total number of ships sending reports-----	176
Number of ice reports-----	64
Total number of ships sending ice reports-----	28
Number of water temperatures-----	1779
Total number of ships sending water temperatures-----	154
Total number of ships requesting special reports-----	12

Of these ships sending reports approximately 42 percent were British, and 21 percent were United States vessels. A total of 18 nationalities were represented by these reports.

Maritime agencies and vessels making use of this service are again urged to submit criticisms and suggestions for better service to the Commandant, U. S. Coast Guard, Washington 25, D. C.

ICE CONDITIONS 1951

JANUARY

The first ice report for the 1951 season was received from the U. S. C. G. C. *Castle Rock*, which, on January 5, while enroute to Ocean Weather Station "B", reported three growlers near 51°35' N., 51°03' W. During the last week of the month, PBY aircraft from the U. S. Coast Guard Air Detachment at Argentia, Newfoundland, made preliminary ice reconnaissance flights in compliance with a request from Commander, International Ice Patrol. The outer limit of field ice was determined to extend from 48°40' N., 53°05' W., to 50°30' N., 52°00' W.

FEBRUARY

By February 6, air reconnaissance revealed that the field ice had drifted southward to an approximate southeast limit of 49°45' N., 50°40' W. Since this indicated a normal seasonal trend, Commander, International Ice Patrol ordered the first PB1G aircraft to Argentia for ice observation. Coast Guard Aircraft PB1G 77249 arrived at Argentia on February 14, and the results of flights made on the 17th and 18th defined the outer limits of field ice from Baccalieu Island, Newfoundland, to 48°30' N., 49°15' W., to 49°05' N., 49°40' W., thence northward to 52°30' N., 50°50' W. The number of icebergs observed in the pack ice was very few, and it was this fact that aroused the first suspicion that a less than normal ice season might be in prospect.

On the 21st the first berg south of latitude $48^{\circ}00'$ N. was reported by the S. S. *Nova Scotia* near $47^{\circ}45'$ N., $49^{\circ}00'$ W., with loose strings of field ice extending 15 miles to the northeast. This was the southernmost ice reported for the month.

The second ice observation aircraft, PB1G 77255, with Commander, International Ice Patrol, arrived in Argentina on February 28.

During February, two aerial flights were made. It is estimated that three bergs drifted south of latitude $48^{\circ}00'$ N. Distribution of field ice and icebergs is shown graphically in figure 1.

MARCH

What later proved to be the southernmost penetration of a berg during the entire season was reported by the S. S. *Senhora Das Candeis* on March 3 near $47^{\circ}16'$ N., $46^{\circ}59'$ W., by the S. S. *Idefjord* on the 4th at $46^{\circ}52'$ N., $47^{\circ}25'$ W., and was last sighted, small and deteriorating, by the ice patrol aircraft on March 15 at $46^{\circ}33'$ N., $47^{\circ}35'$ W., having drifted south-southwestward at about 4 miles per day.

A thorough aerial search of the southern and eastern slopes of the Grand Banks on March 3 confirmed the absence of ice and bergs in that area. A flight on the 4th, placed the field ice limits of loose strings from Baccalieu Island to $48^{\circ}35'$ N., $50^{\circ}00'$ W., indicating no appreciable change from the limits observed in mid-February. On March 14, an air search north and northeast of the Grand Banks to latitude $50^{\circ}00'$ N. indicated that, except for occasional loose strings, no ice pack of any description remained in that area. Apparently the strong easterly and southeasterly gales which had prevailed for the preceding week had all but destroyed what little ice there was. Thus, the earlier indications that the ice season would most probably be a light one were substantiated.

On the 15th two flights searched the eastern edge of the Grand Banks between latitudes $43^{\circ}00'$ N. and $48^{\circ}20'$ N.; except for the berg mentioned above, the only ice sighted were several small growlers in the vicinity of the Virgin Rocks (probably the remnants of the berg reported by the S. S. *Glimmaren* on the 10th at $46^{\circ}55'$ N., $49^{\circ}30'$ W.).

Two flights on March 20 between latitudes $47^{\circ}00'$ N. and $52^{\circ}35'$ N. eastward to longitude $50^{\circ}00'$ W. completed a search of the entire ice region from the Tail of the Grand Banks to the Strait of Belle Isle. Further recession of field ice limits and an absence of bergs were revealed, confirming beyond any doubt the destruction of field ice which had been considered a potential threat to the northern routes early in the month. Again easterly gales

which prevailed from the 17th through the 19th were probably the responsible factor.

In view of this evident lack of both field ice and bergs, one PB1G aircraft and crew was ordered to return to its home base for a 2-week period on March 22. Also, both of the ice patrol cutters, the *Acushnet* and the *Androscoggin*, were placed on extended stand-by since it was obvious that, barring some extreme development, their services would not be required this season.

Unfavorable weather precluded further searches until March 30 when a flight scouted the area between $47^{\circ}00'$ N. and $49^{\circ}00'$ N. from the coast to longitude $47^{\circ}00'$ W., the only sighting being a growler in Conception Bay, Newfoundland.

The annual aerial survey of ice conditions in the Gulf of St. Lawrence and Cabot Straits was inaugurated by the Canadian Department of Transport on March 7 and reported "ice conditions abnormally good" with an assurance of a very early opening of navigation.

Reports of about a dozen bergs between latitudes $56^{\circ}00'$ N. and $58^{\circ}00'$ N. and longitudes $36^{\circ}00'$ W. and $40^{\circ}00'$ W. by the U. S. C. G. Cutters *Mackinac* and *Rockaway* while enroute to and from Ocean Weather Station "A", on about March 10, were probably the most unusual sightings of the month. Their position, well southeast of southern Greenland, raises some speculation as to a possible shift in the general current pattern in that locality.

During March, 10 flights were made. It is estimated that two bergs drifted south of latitude $48^{\circ}00'$ N. Distribution of field ice and icebergs is shown graphically in figure 2.

APRIL

A flight on April 1 searched along the Labrador current to latitude $55^{\circ}00'$ N. and defined the outer limits of loose strings of field ice from Cape Bauld, Newfoundland, to $53^{\circ}10'$ N., $52^{\circ}10'$ W., thence northward. The only two bergs sighted were well north of latitude $53^{\circ}30'$ N. On the 8th, it was decided to explore the area well north of the usual search areas to ascertain whether any ice between latitudes $53^{\circ}00'$ N. and $56^{\circ}00'$ N. might conceivably menace shipping late in the season. When a total of only six small bergs and several growlers was observed in the entire area searched, there remained little doubt that the 1951 season would be recorded as one of the lightest seasons since the inception of Ice Patrol services. The policy of returning a PB1G aircraft to its home base was therefore continued.

On April 19 a flight was carried out to ascertain the navigability of the Strait of Belle Isle and eastward along track "G" to longitude $53^{\circ}30'$ W. Since the northern passage was found to be partially closed and strings of field ice were observed from the western

entrance to Point Amour, passage through the strait was not recommended except for ice-protected vessels. A total of five bergs and growlers was sighted in the strait. The only field ice remaining in the Newfoundland area extended close inshore from Fogo Island to Cape Bauld. Several grounded bergs were sighted in the vicinity of Funk Island and Cape Freels, Newfoundland.

Due to reduced visibility in widespread fog patches, four flights were necessary between April 20 and 26 to scout visually the area between latitudes $47^{\circ}00'$ N., and $50^{\circ}30'$ N., west of longitude $48^{\circ}00'$ W. Except for the grounded bergs sighted on the 19th, no ice was discovered. The same held true for the flight of the 30th north of that area to latitude $52^{\circ}00'$ N.

The Canadian Department of Transport discontinued aerial surveys in the Gulf of St. Lawrence on April 30, reporting all routes to river and maritime ports clear for navigation. The extreme eastern limits of scattered ice observed by this service during the entire season were sighted in early March from Heath Point, Anticosti to the Magdalen Islands, a marked difference from the normal.

Ten ice observation flights were made during the month. No bergs were known to have drifted south of latitude $48^{\circ}00'$ N. Distribution of icebergs is shown graphically in figure 5.

MAY

After establishing the navigability of the Strait of Belle Isle in early May, a PB1G aircraft was dispatched to Goose Bay, Labrador, for aerial ice observations along the Labrador coast as far north as Cape Chidley. On May 6 this plane effected a search 60 miles off the Labrador coast from latitude $55^{\circ}00'$ N. to $60^{\circ}00'$ N. Consolidated pack ice close inshore along with about 59 icebergs were observed from the entrance of Hamilton Inlet to $59^{\circ}00'$ N. Field ice was light and open north of that point. On the following day, nine bergs were sighted in open water from $55^{\circ}00'$ N. southward to $51^{\circ}40'$ N., west of longitude $51^{\circ}00'$ W. These bergs were so small that their chances of survival were considered negligible. The southernmost berg was sighted at $52^{\circ}57'$ N., $52^{\circ}58'$ W., and was the only ice that was given any chance of completing the long journey to the Banks by entering the eastern branch of the Labrador current. Between the 7th and the 19th this berg was sighted numerous times both by ice patrol aircraft and merchant vessels on track "G". Its final sighting on the 19th in position $51^{\circ}36'$ N., $53^{\circ}45'$ W., indicated a south-southwesterly drift at about 7 miles per day over the 12-day period. The berg was now so far west and was so reduced in size that it could no longer be considered a possible menace to the major trans-

Atlantic lanes. With this threat removed and final searches between 47°30' N. and 50°30' W. eastward to 48°30' W., removing all doubts of possible bergs in that area, the ice patrol season was terminated. Commander, International Ice Patrol, and staff departed *Argentia* on May 24. Commanding Officer, Coast Guard Air Detachment, was directed to conduct periodic flights between latitudes 49°00' N. and 52°00' N. to detect any bergs drifting south in that area.

Five ice observation flights were made during the month. No bergs were known to have drifted south of latitude 48°00' N. Distribution of icebergs is shown graphically in figure 6.

JUNE-OCTOBER

No known icebergs came south of 48° N. during this period.

NOVEMBER-DECEMBER

On 25 November the S.S. *Mina L. Kambanis* sighted a berg 200 feet high and 800 feet long at 48°30' N., 50°15' W. It is estimated that this berg drifted south of 48° N. during the month of December.

WEATHER

Due to the lack of ice and the remoteness of the southernmost ice from the steamer lanes, weather did not play its usual major role in the operations of the ice patrol. At no time did there exist any urgency to effect a flight when the predicted weather was marginal. Nearly all flights were scheduled either after the winds of a passing disturbance had shifted to the northwest (thereby introducing a fresh flow of dry polar air into the search area) or when a dry high-pressure area was dominant. And yet, even with these ideal meteorological conditions, it was rare to find the area north of latitude 50°00' N. completely void of low stratus and fog.

Weather did, however, exert considerable influence on the ice conditions during March, especially the field ice which might have developed into a threat to the northern tracks. A deep, stagnant cyclone south of Sable Island between March 9 and 13 produced east to southeast gales that all but destroyed the crop of field ice. This, followed by a Great Lakes low pressure system that moved south of Newfoundland and stalled between the 15th and 18th (southeast winds) and a central Labrador storm on the 21st (southerly gales), left the area south of latitude 50°00' N. completely void of pack ice except for scattered remnants and loose strings.

The weather during the first half of April was characterized by a series of numerous, slow moving low-pressure areas passing

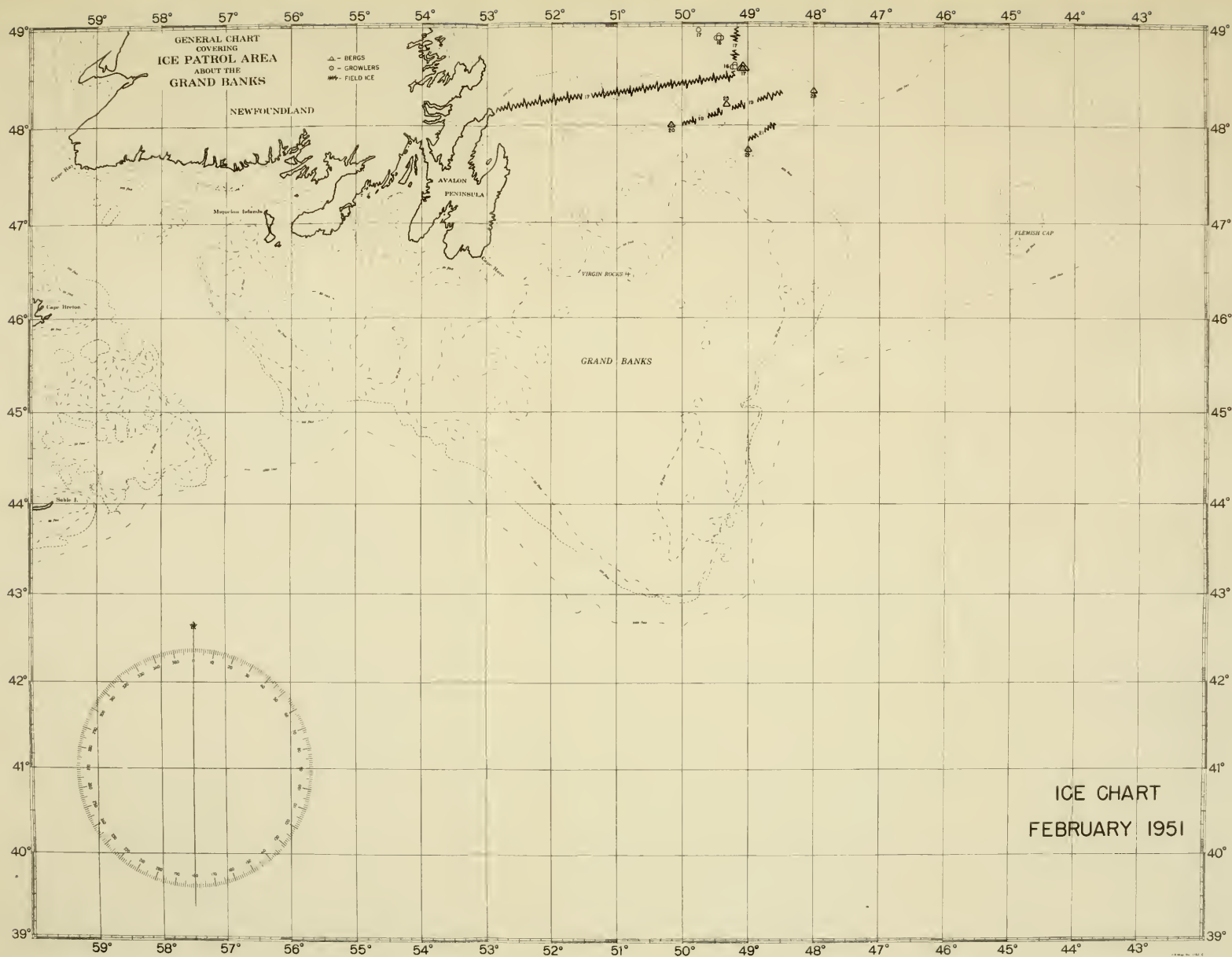


FIGURE 1.—Ice conditions, February 1951. Figures indicate day of month ice was sighted or reported.

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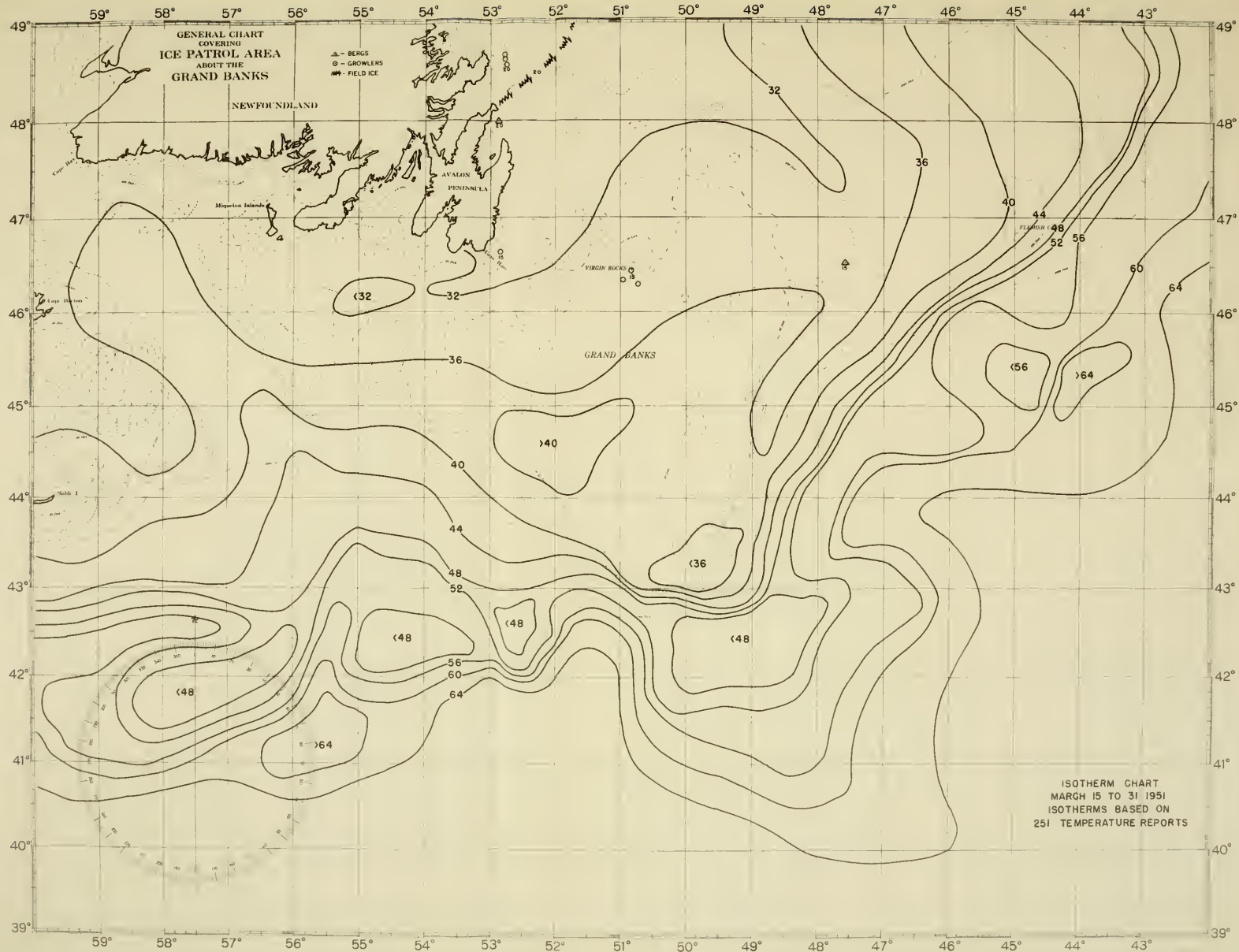


FIGURE 3.—Ice conditions and surface isotherms for the period 15-31 March 1951. Figures indicate day of month ice was sighted or reported.

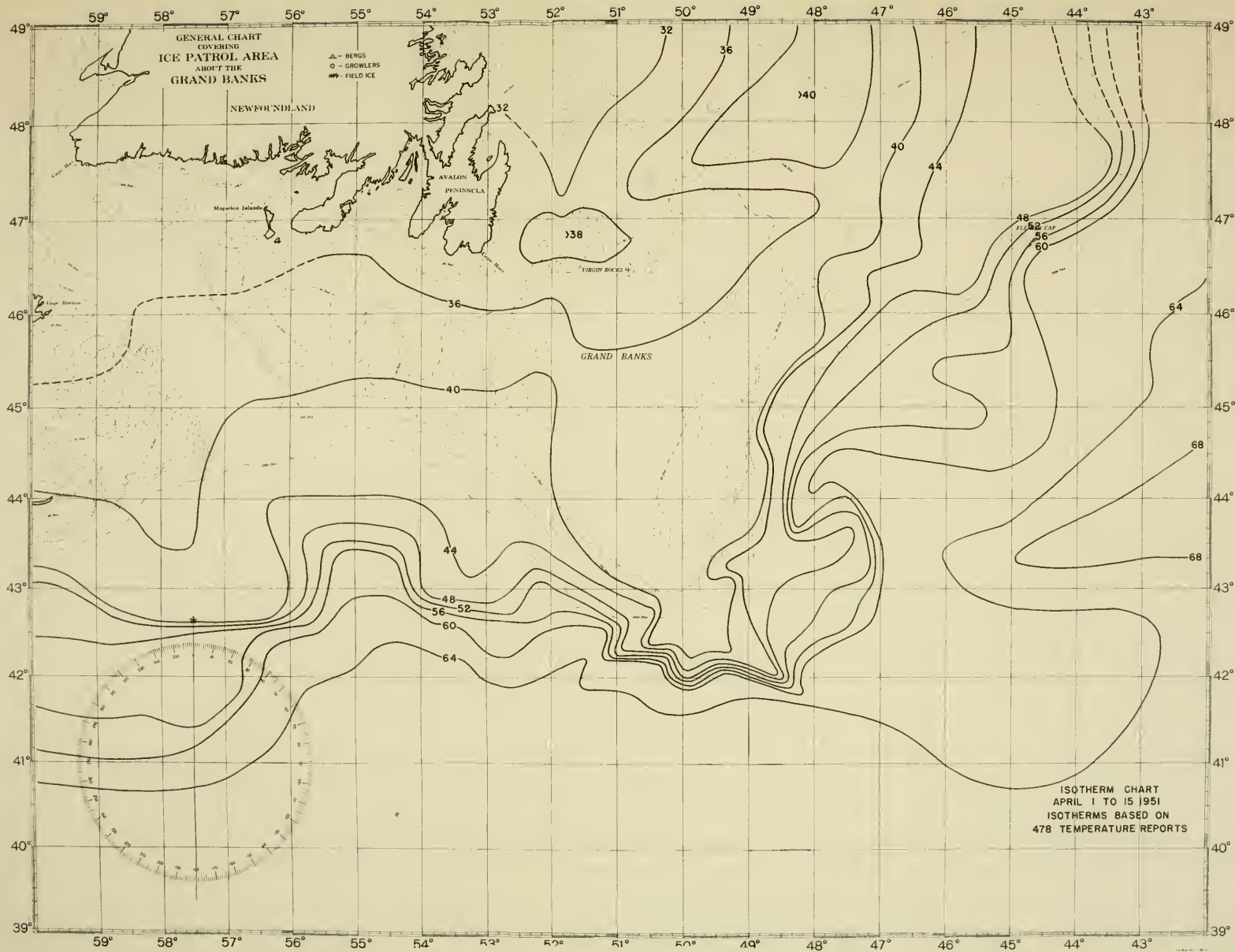


FIGURE 4.—Surface isotherms for the period 1-15 April 1951. No ice was sighted or reported within the limits of this chart during the period.

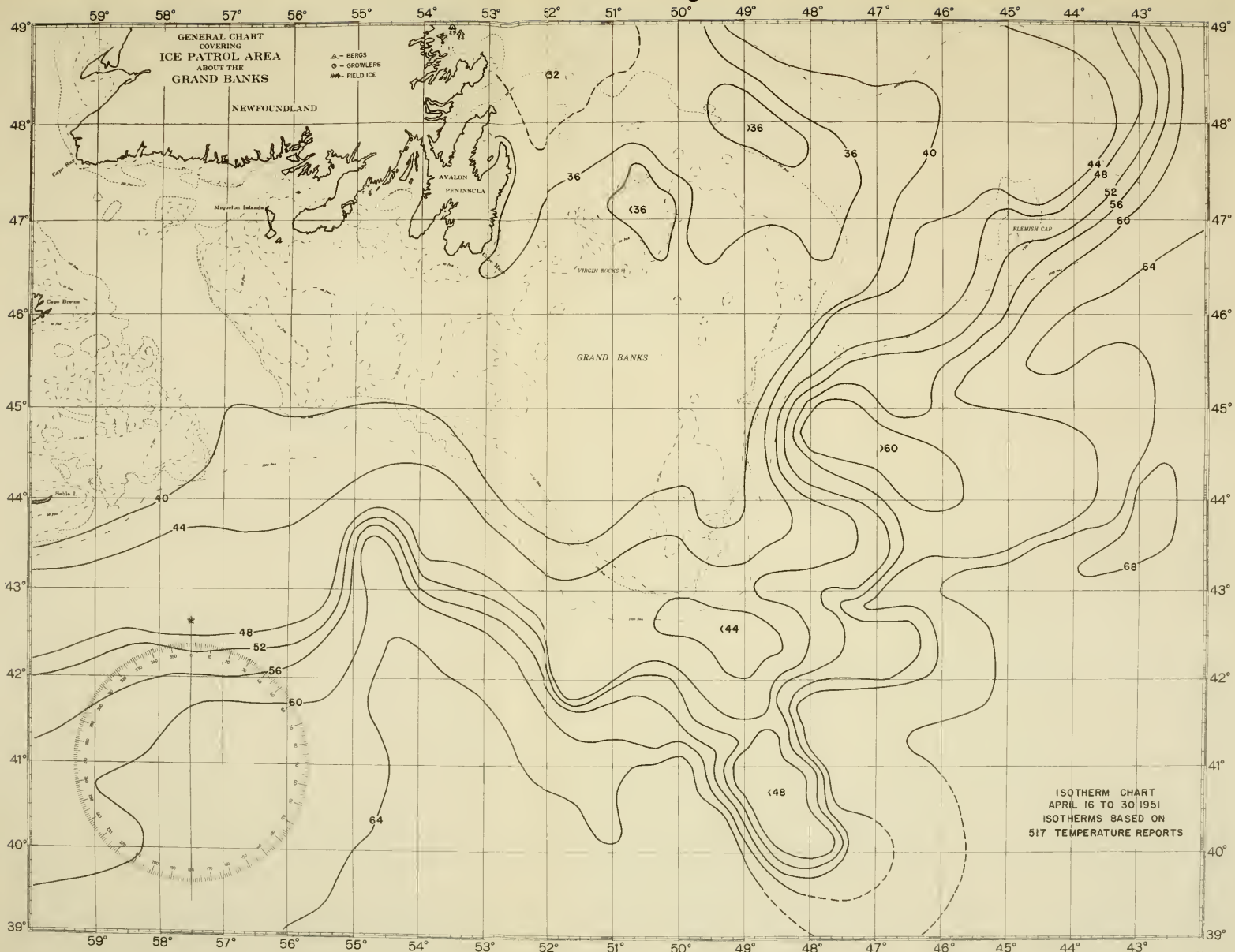


FIGURE 5.—Ice conditions and surface isotherms for the period 16-30 April 1951. Figures indicate day of month ice was sighted or reported.

south and southeast of Newfoundland; thus, the prevailing winds were from the easterly quadrant for almost the entire period. Although this pattern was altered somewhat during the latter part of the month, with the passing of several storms north of the Strait of Belle Isle, the more intense cyclones were still "northeasters" in the ice-patrol area. Since, during an average year, an equal number of storms pass north and south of Newfoundland, the track of most of these "lows" to the south during April was a marked departure from normal.

The influx of warm, moist air over the area during the first 3 weeks in May gave indications of a changing trend from winter to summertime conditions. Storms were less numerous and not as violent as in the preceeding months. Pressure gradients showed a marked tendency to weaken and become ill-defined, and by the end of the ice-patrol season, southwest winds, with attendant fog, had established themselves in the Grand Banks.

Climatological records at both the U. S. Naval Station at Argentia, Newfoundland, and the U. S. Air Force Base at Goose Bay, Labrador, as well as observations from other sources indicate that the winter of 1950-51 was one of the mildest on record both from a standpoint of lack of snow as well as temperatures. What effect, if any, this had on the lack of bergs is the subject of speculation at this time and will require further study before an evaluation can be made.

TABLE OF ICE REPORTS, 1951

No.	Date	Name of vessel	North latitude	West longitude	Description
1	Jan. 5	U. S. C. G. C. Castle Rock.	51 35	51 03	3 Growlers.
2	Jan. 23	U. S. C. G. Aircraft	50 30 to 52 00 thence northward	52 00 52 35	Outer limits of drift ice.
3	Jan. 29	U. S. C. G. C. Castle Rock.	51 50 to 50 50 North of a line from	50 50 55 30	Observed heavy pack ice.
4	Jan. 30	U. S. C. G. Aircraft	50 15 to 53 50 North of 49 45	53 50	Young pack ice cover nine-tenths.
5	Feb. 6	do	and West of 50 00	51 30	Light open field ice one-tenth cover.
6	do	do	to 51 30	51 25	Thence ten-tenths cover.
7	Feb. 8	U. S. C. G. C. Castle Rock.	50 25 to 49 48	49 42	Small berg.
8	Feb. 11	Ondina	55 42	33 21	Heavy scattered field ice.
9	Feb. 14	U. S. C. G. C. Rockaway	49 40	50 08	Small berg.
10	Feb. 15	U. S. C. G. Aircraft	49 44 to 52 15	54 10	Large patch field ice extending 10 miles to westward.
11	Feb. 16	Bullaren	48 35 to 49 09	55 33	Field ice nine-tenths cover.
12	do	U. S. C. G. C. Rockaway	59 28 to 48 30	38 12	Field ice and growlers extending west and north at least 10 miles.
13	Feb. 17	Ice Patrol plane	Baccalieu Island to 49 00	49 15	Small berg.
14	do	do	thence northward 48 35 to 49 05	49 05	Southern limits field ice.
15	do	do	49 00 to 48 50	49 45	4 small growlers (same as No. 11).
16	Feb. 18	do	48 50 to 49 05	49 10	Small growler.
17	do	do	49 05 to 50 30	49 40	Eastern limits field ice.
18	do	do	50 30 to 50 45	50 50	Berg.
19	do	do	50 45 to 51 09	50 46	Do.
20	do	do	51 09 to 51 29	51 32	Do.
21	do	do	51 29 to 51 32	51 25	Do.
22	do	do	51 32 to 50 31	50 05	Growler.
23	do	do	50 31 to 51 19	50 49	Do.
24	do	do	51 19 to 51 38	50 54	Do.
25	do	do	51 38 to 52 16	51 06	Do.
26	do	U. S. C. G. C. McCullough	48 54 to 55 40	49 27	4 growlers.
27	Feb. 19	Mormacfir	55 40 to 48 00	33 44	Small berg and growlers.
28	do	Gripsholm	48 00 to 48 20	50 00	Strings of field ice.
29	do	Taurus	48 20 to 54 05	48 30	Large berg.
30	Feb. 20	Trollafoss	59 06 to 48 00	32 50	Do.
31	Feb. 21	Wilh. Colding	48 00 to 48 00	31 41	Berg.
32	do	Nova Scotia	47 50 to 47 50	50 10	Loose strings of slob ice.
33	Feb. 22	Aircraft	47 45 to 49 50	49 00	Berg.
34	Feb. 25	Derrynane	49 50 to 48 13	50 10	Large berg.
35	Feb. 28	U. S. S. Redbud	48 21 to 55 54	49 20	Berg and narrow belt of field ice (same as No. 11).
36	do	Dettifoss	55 54 to 49 05	48 00	Berg.
37	Mar. 2	do	49 05 to 48 40	50 15	Do.
38	Mar. 3	Estevao Gones	48 40 to 47 25	50 40	Ice floes.
39	do	Senhora Das Candeias	47 25 to 47 16	48 49	Growler (same as No. 11).
40	Mar. 4	Ice Patrol plane	Baccalieu Island to 48 35	46 59	Berg (same as No. 35).
41	do	do	48 35 to 48 05	50 00	Southern limits field ice.
42	do	do	48 05 to 48 06	50 00	Loose isolated strings field ice.
43	do	do	48 06 to 46 40	49 35	Do.
					Small berg.

TABLE OF ICE REPORTS, 1951—Continued

No.	Date	Name of vessel	North lati- tude	West longi- tude	Description
44	Mar. 4	Idefjord.....	46 52	47 25	Small berg and several small pieces (same as No. 35).
45	do.	Lyngenfjord.....	47 35	51 03	Several growlers (same as No. 30).
46	do.	do.	47 48	50 50	Field ice and growlers (same as No. 30).
47	Mar. 6	Nova Scotia.....	47 39	51 22	Growler (same as No. 30).
48	Mar. 7	U. S. S. Redbud.....	59 53	47 03	Numerous bergs.
49	do.	U. S. S. Edisto.....	48 02	52 10	Entered loose pack, pancake and blocks less than one-third cover extending east and west to limit of visibility.
50	do.	do.	48 10	52 00	Pack, pancake, block and slush ice two- to ten-tenths cover.
51	do.	do.	50 00	52 00	Berg.
52	Mar. 8	Ice Patrol plane.....	49 00	52 00	Southern limits field ice.
53	do.	do.	47 19	52 45	Berg.
54	Mar. 8	U. S. S. Edisto.....	48 00	49 40	Pack, pancake, blocks and slush ice nine-tenths cover.
55	do.	do.	48 24	52 48	
56	do.	do.	50 00	52 00	
57	Mar. 8	U. S. S. Edisto.....	50 00	52 25	Pack, pancake, blocks and slush ice nine-tenths cover.
58	do.	U. S. S. Redbud.....	50 00	52 25	Brede Fjord shore to shore between
59	do.	U. S. C. G. C. Coos Bay.....	45 47	45 30	Pack ice.
60	do.	do.	48 00	50 05	Encountered broken floe ice.
61	do.	do.	52 25	53 10	
62	Mar. 9	U. S. S. Edisto.....	53 15	54 45	Pack, pancake, blocks and slush ice nine-tenths cover.
63	do.	do.	53 58	54 00	
64	do.	U. S. C. G. C. Mackinac.....	55 43	39 37	Small berg.
65	do.	Trollafoss.....	57 28	30 20	Berg.
66	do.	do.	56 52	38 37	Do.
67	do.	U. S. C. G. C. Mackinac.....	56 17	38 54	Small berg.
68	do.	do.	56 28	38 53	Large berg.
69	do.	do.	56 38	38 32	Do.
70	do.	do.	57 06	37 50	Berg.
71	Mar. 10	Glimmaren.....	46 55	49 30	Large berg.
72	do.	U. S. C. G. C. Rockaway.....	58 13	38 00	Berg.
73	do.	do.	58 02	38 10	Do.
74	do.	do.	57 35	38 28	Berg.
75	Mar. 11	do.	57 08	39 36	Do.
76	do.	do.	59 06	48 50	
77	Mar. 12	Unknown.....	60 13	47 04	Many bergs.
78	do.	do.	57 28	51 26	Entered brash, broken remnants o storis about one-tenth cover dozens of bergs and growlers.
79	Mar. 13	Aircraft.....	48 00	51 00	Large berg.
80	do.	do.	48 30	50 40	
81	Mar. 14	Ice Patrol plane.....	49 00	51 00	Outer limits loosely scattered field ice.
82	do.	do.	49 00	52 40	
83	do.	do.	48 47	53 14	Berg.
84	do.	do.	48 09	53 15	Growler (same as No. 53).
85	do.	do.	48 44	51 22	Growler (same as No. 51).
86	do.	do.	48 44	51 26	Growler.
87	do.	do.	48 46	51 26	Growler (same as No. 51).
88	do.	U. S. C. G. C. Sorrel.....	57 45	47 19	Large berg.
89	do.	do.	57 55	47 14	Do.
90	do.	do.	57 47	47 29	Several small bergs in vicinity.
91	Mar. 15	Ice Patrol plane.....	46 31	47 35	Berg (same as No. 35).
92	do.	do.	46 17	50 44	Growler and pieces of ice (same as No. 30).
93	do.	do.	46 20	50 58	Growler (same as No. 30).
94	do.	do.	46 26	50 51	Do.
95	do.	do.	46 38	52 51	Do.
96	do.	do.	46 20	51 06	Pieces of ice.
97	Mar. 15	Blue Foam.....	17 miles east by south of Cape Race.		Berg (same as No. 30).
98	do.	U. S. S. Redbud.....	Arsuk Fjord		Several bergs in vicinity.
99	do.	Aircraft.....	55 52	38 20	Berg.
100	Mar. 16	do.	50 30	52 00	Do.

TABLE OF ICE REPORTS, 1951—Continued

No.	Date	Name of vessel	North lati- tude	West longi- tude	Description
92	Mar. 20	Ice Patrol plane.....	Baccalieu Island to 48 45 | 51 50 to 50 20 | 52 00 to 50 40 | 53 00 thence northerly	Extreme outer limits widely scat- tered light strings and pieces field ice.	
93	do	do	48 00 | 52 53	Berg (same as No. 53).	
94	do	do	49 52 | 53 55	Do.	
95	do	do	50 10 | 53 50	Do.	
96	do	do	50 24 | 54 21	Do.	
97	do	do	48 34 | 52 47	Growler.	
98	do	do	48 38 | 52 48	Do.	
99	do	do	48 41 | 52 48	Do.	
100	do	do	52 02 | 52 02	Do.	
			Raritan Point to 59 48 | 44 45 to 59 48 | 45 22 to Igdlakasik Island to Raritan Point 59 55 | 44 24 to 59 41 | 44 24 to 59 41 | 45 10 to 59 48 | 45 10 to 59 48 | 44 45 to Raritan Point 50 23 | 55 00 56 55 | 50 39	Field ice.	
101	Mar. 22	U. S. C. G. C. Sorrel.....			
102	do	do			Numerous bergs.
103	do	Aircraft.....			Berg.
104	Mar. 25	U. S. C. G. C. Coos Bay.			Small berg, two growlers 3 miles to the east.
105	do	do	56 34 | 50 59	Growler.	
106	Mar. 30	Ice Patrol plane.....	48 00 | 52 55	Growler (same as No. 93).	
107	Apr. 1	do	Belle Isle toward the ENE about as far as 52°00'.	Limits of field ice.	
108	do	do	53 38 | 53 05	Small berg.	
109	do	do	54 30 | 54 00	Do.	
			Fogo Island to 53 30 | 52 00 to 55 15 | 52 20 to 55 30 | 56 00 thence northwest 54 13 | 54 22 54 32 | 53 35 54 35 | 55 00 54 58 | 55 12 55 04 | 54 48 54 19 | 55 12 54 30 | 54 55 54 55 | 55 07 55 07 | 54 12 55 07 | 55 45 55 08 | 56 18 58 30 | 58 30 57 55 | 43 30	Occasional loose strings field ice. Thence medium close pack.	
110	Apr. 8	do			
111	do	do			Small berg.
112	do	do			Do.
113	do	do			2 small bergs.
114	do	do			Small berg.
115	do	do			Do.
116	do	do			Growler.
117	do	do			Do.
118	do	do			Do.
119	do	do			2 growlers.
120	do	do			Growler.
121	do	do			Do.
122	Apr. 10	Aircraft.....			Berg.
123	Apr. 14	do			Do.
124	Apr. 19	Ice Patrol plane.....	Close inshore from Fogo Island to Cape Bauld, New- foundland. 51 57 | 55 30 Northward along Labrador coast Belle Isle to Point Amour. 49 01 | 53 27 49 18 | 53 23 49 32 | 53 31 49 42 | 53 12 51 19 | 57 07 51 25 | 56 40 51 31 | 56 43	Field ice.	
125	do	do			Light field ice.
126	do	do			Light strings field ice.
127	do	do			Berg.
128	do	do			Do.
129	do	do			Do.
130	do	do			Large berg.
131	do	do			Berg.
132	do	do			Do.
133	do	do			Do.

TABLE OF ICE REPORTS, 1951—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
134	Apr. 19	Ice Patrol plane.....	51 42	56 03	Berg.
135	do.	do.	52 14	55 33	Do.
136	do.	do.	52 15	55 36	Do.
137	do.	do.	52 16	55 35	Do.
138	do.	do.	52 19	55 41	Do.
139	do.	do.	49 35	53 45	Growler.
140	do.	do.	49 51	53 41	Do.
141	do.	do.	51 38	56 18	Do.
142	do.	do.	51 50	55 32	Do.
143	do.	do.	52 42	55 30	Do.
144	Apr. 20	do.	49 17	53 34	Berg (same as No. 128).
145	do.	do.	49 43	43 11	Berg (same as No. 130).
146	Apr. 22	do.	49 11	53 23	Berg (same as No. 128).
147	do.	do.	49 09	53 23	Growler.
148	Apr. 24	U. S. N. Aircraft.....	Close inshore from Fogo Island to Cape Bauld.		Field ice.
149	do.	do.	Strait of Belle Isle.....		Scattered patches field ice.
150	do.	do.	Hamilton Inlet.....		Clear but approaches obstructed with field ice.
151	Apr. 25	U. S. A. F. Aircraft.....	Goose Bay and Lake Melville to 59°35'.		Hard ice.
152	do.	do.	Hamilton Inlet to George Island.		Open water.
153	do.	do.	George Island to Gannet Island to South Wolf Island.		Six-tenths decreasing to three-tenths pan ice. Very few bergs.
154	Apr. 26	Ice Patrol plane.....	48 55	53 27	Berg (same as No. 127).
155	do.	do.	49 13	53 21	Berg (same as No. 128).
156	do.	do.	49 42	53 12	Berg (same as No. 130).
157	Apr. 27	Absecon Baird.....	Cape St. John, Nfld.		Heavy ice.
158	Apr. 29	Ice Patrol plane.....	Notre Dame Bay, Nfld.		Field ice.
159	do.	do.	48 59	53 35	Berg (same as No. 127).
160	do.	do.	49 14	53 32	Berg (same as No. 128).
161	do.	do.	49 40	53 56	Do.
162	do.	do.	49 43	53 11	Berg (same as No. 130).
163	do.	do.	49 44	54 04	Do.
164	do.	do.	49 51	54 05	Do.
165	do.	do.	49 52	54 00	Do.
166	do.	do.	49 55	53 49	Growler.
167	May 6	do.	Hamilton Inlet to 59°00' close to beach and extending 20 to 30 miles off.		Consolidated pack, 58 bergs in pack.
168	do.	do.	North of 59°00'.....		} Light open field ice.
			Beach to 30 miles off.		
169	May 7	do.	South Wolf Island, Labrador, to Hamilton Inlet; thence about 30 miles wide northwesterly at least 50 miles.		} Light belt field ice.
			{ 54 25 | 54 25		
170	do.	do.	{ Hamilton Inlet to Capell Harrison, Lab.		Patch field ice. 16 bergs.
172	do.	do.	49 20	53 15	Berg.
173	do.	do.	49 30	53 28	Do.
174	do.	do.	49 38	53 37	Do.
175	do.	do.	49 50	53 55	Do.
176	do.	do.	50 10	54 15	Do.
177	do.	do.	South Pass Strait of Belle Isle.		Do.
178	do.	do.	52 12	55 45	Berg.
179	do.	do.	53 40	55 55	4 bergs.
180	do.	do.	Off Gannet Island, Labrador.		Berg.
181	do.	do.	53 54	56 04	Do.
182	do.	do.	53 56	54 32	Do.
183	do.	do.	54 09	56 28	Do.
184	do.	do.	54 20	55 00	5 bergs.
185	do.	do.	54 25	53 50	Growler.
186	May 11	do.	49 37	53 56	Berg.
187	do.	do.	49 39	53 43	Do.
188	do.	do.	52 48	53 34	Berg.
189	do.	do.	50 15	54 23	Growler.
190	do.	do.	50 18	54 30	Do.
191	do.	do.	50 22	54 04	Do.
192	do.	do.	50 33	54 18	Do.
193	do.	do.	53 11	54 04	Do.

TABLE OF ICE REPORTS, 1951—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
194	May 14	Ice Patrol plane.....	South Wolf Island across Hamilton Inlet to 60 miles east of Cape Harrison thence north-west.		Consolidated pack.
195	do.	do.	49 37	53 52	Small berg.
196	do.	do.	49 52	53 42	Berg.
197	do.	do.	49 52	54 35	Large berg.
198	do.	do.	50 04	53 10	Berg.
199	do.	do.	50 05	53 28	Do.
200	do.	do.	50 06	54 45	Do.
201	do.	do.	Off Cape St. John, Newfoundland.		Small berg.
202	do.	do.	Entrance White Bay, Newfoundland.		Berg.
203	do.	do.	Notre Dame Bay, Newfoundland.		4 small bergs.
204	do.	do.	52 24	53 38	Berg.
205	do.	do.	Off Hamilton Inlet, Labrador.		Several small bergs.
206	do.	do.	54 27	56 30	Berg.
207	do.	do.	54 30	56 00	Several small bergs.
208	do.	do.	54 45	56 05	Berg.
209	do.	Lismoria	51 22	57 16	Do.
210	do.	do.	51 34	56 34	Do.
211	May 15	do.	52 20	53 22	Small piece ice.
212	do.	Ascania	52 20	53 34	Large berg.
213	May 16	Asia	52 21	53 43	Do.
214	do.	do.	52 19	53 28	Growler.
215	do.	do.	51 37	55 42	Large berg.
216	do.	do.	51 37	55 42	Berg.
217	May 18	Aircraft	49 20	52 40	Do.
218	do.	do.	49 20	53 18	Do.
219	do.	do.	49 20	53 30	Do.
220	do.	do.	51 08	58 18	Do.
221	do.	do.	51 17	57 53	Do.
222	do.	do.	51 21	57 22	Do.
223	May 19	do.	50 51	50 20	Do.
224	do.	do.	51 30	57 30	Do.
225	do.	Ice Patrol plane.	20 to 30 miles wide off Labrador Coast from Gannet Island to Flase Cape; thence northward.		Belt of close pack ice.
226	do.	do.	51 35	53 43	Berg.
227	do.	Unknown ship	49 11	53 11	Do.
228	May 20	U. S. S. Redbud	48 42	52 18	Large berg.
229	May 27	Empress of Scotland	52 29	53 19	Growler.
230	May 30	Aircraft	49 38	53 43	Berg.
231	June 2	Hydro, Wash.	52 48	55 08	Large berg.
232	do.	do.	52 38	54 58	Small berg.
233	do.	do.	52 40	54 55	Small growler.
234	June 4	do.	59 10	49 43	Berg.
235	do.	do.	Between Bell Isle and Labrador Coast.		10 growlers.
236	June 5	do.	52 22	55 25	Berg and small pieces.
237	June 10	Unknown ship	72 30	57 18	2 bergs.
238	June 28	Hydro, Wash.	51 56	55 52	Berg.
239	June 30	Aircraft	49 23	41 57	Large berg.
240	July 2	do.	55 43	56 40	Numerous large and small bergs sighted within 50-mile area.
241	July 5	Hydro, Wash.	54 44	54 35	Large berg.
242	July 6	do.	58 00	59 20	2 growlers.
243	July 7	do.	52 17	52 08	Berg.
244	do.	do.	59 10	61 35	4 bergs.
245	July 8	do.	56 00	55 53	30 bergs.
246	do.	do.	53 08	52 05	Large berg.
247	July 13	do.	52 52	51 07	Do.
248	do.	do.	55 02	39 20	Possible berg.
249	do.	do.	52 42	50 44	Large berg.
250	July 14	do.	53 50	52 47	Berg.
251	do.	do.	52 40	50 50	Large berg.
252	do.	do.	54 55	52 41	Berg.
253	July 15	do.	70 00	56 50	Large berg.
254	July 18	do.	65 20.5	54 56.5	Do.
255	do.	do.	66 12	55 12	Do.
256	do.	do.	69 18	54 12	5 large bergs.
257	do.	do.	70 00	56 04	Large berg.
258	do.	do.	69 58	56 35	Do.
259	July 19	do.	52 59	55 19	3 bergs.

TABLE OF ICE REPORTS, 1951—Continued

No.	Date	Name of vessel	North lati- tude	West longi- tude	Description
			° ' "	° ' "	
260	July 19	Hydro. Wash.	54 24	54 18	2 large bergs.
261	do.	do.	54 35	54 08	Berg.
262	do.	do.	54 37	54 05	Do.
263	do.	do.	54 56	53 09	Do.
264	do.	do.	54 42	53 15	Do.
265	do.	do.	54 45	53 16	Do.
266	do.	do.	54 50	53 47	Do.
267	do.	do.	54 53	53 44	Do.
268	do.	do.	54 54	54 00	Do.
269	do.	do.	54 56	53 15	Do.
270	do.	do.	54 55	53 26	Do.
271	do.	do.	55 02	53 49	Do.
272	do.	do.	55 03	53 36	Do.
273	July 21	do.	54 35	54 03	Very large berg.
274	July 23	do.	52 02	50 02	Large berg.
275	do.	do.	52 53	54 31	Do.
276	July 25	do.	56 16	51 14	Do.
277	July 26	do.	53 23	52 01	Do.
278	do.	do.	52 58	52 05	2 bergs.
279	July 27	do.	64 39	54 28	Large berg, breaking up.
280	July 29	do.	56 09	51 50	Large, low, flat berg.
281	do.	do.	54 46	51 55	Small berg.
282	July 30	do.	52 14 .5	51 05	Large berg and growler.
283	do.	do.	52 12	51 00	Small growler.
284	do.	do.	52 02	50 44 .5	2 large bergs and growler.
285	Aug. 1	do.	57 55	44 00	2 large bergs.
286	Aug. 3	do.	52 34	51 57	2 bergs.
287	do.	MATS Aircraft.	59 00	45 00	Berg drifting SE.
288	Aug. 4	U. S. C. G. C. Barataria.	52 30	51 41	2 bergs.
289	do.	Hydro, Wash.	68 06	54 38	Large berg.
290	Aug. 8	do.	59 29	48 07	Do.
291	Aug. 8	S. S. Harold T. Anderson.	59 10	46 45	Large berg.
292	Aug. 15	Hydro, Wash.	49 00	50 36	} Two bergs located by radar.
			49 06	50 36	
293	Aug. 16	do.	52 27	53 22	Large berg.
294	Aug. 17	do.	65 17	55 25	Large berg and growlers extending SE.
295	Aug. 30	do.	53 27	55 01	Berg.
296	do.	do.	54 17	55 12	Small berg.
297	Sept. 1	U. S. C. G. C. Eastwind.	53 04	54 57	Berg.
298	Sept. 3	Hydro, Wash.	62 06	53 25	Large growler.
299	do.	do.	61 51	54 57	Large berg.
300	Nov. 1	do.	53 44	55 47	Do.
301	Nov. 5	do.	56 25	59 23	Do.
302	Nov. 16	S. S. Michalakias.	50 49	50 25	Berg.
303	Nov. 17	Hydro, Wash.	50 40	50 20	Large berg.
304	Nov. 25	S. S. Mina L. Kambanis.	48 30	50 15	Berg 200 feet high and 800 feet long.
305	Nov. 29	S. S. Anguslen.	48 56	48 42	Large berg.

PHYSICAL OCEANOGRAPHY OF THE GRAND BANKS REGION AND THE LABRADOR SEA IN 1951

By Floyd M. Soule, P. S. Branson and R. P. Dinsmore ¹

The 180-foot tender-class cutter *Evergreen* again served as oceanographic vessel of the ice patrol during 1951. No marked alterations affecting the oceanographic work were made in the vessel since the 1950 season.

The oceanographic work of the 1951 season began with the *Evergreen's* departure from Argentia on 2 April to make a current survey of the waters over and immediately seaward of the southwestern, southern, and eastern slopes of the Grand Banks with the survey extending northeastward as far as Flemish Cap. The work of collection of data began at station 4307, located at 43°32.5' N., 51°32' W., on the late afternoon of 3 April and progressed eastward around the Tail of the Banks and thence northward to Flemish Cap where the final station of the survey, number 4385, was completed 12 days later. The *Evergreen* then proceeded to Argentia, arriving there on the morning of 17 April. This survey was made under most unfavorable weather conditions for oceanographic work. Only once, for the brief period of 3 hours, was it necessary to heave to because of weather; but conditions frequently reached the point of being just short of limiting conditions for oceanographic work. Because of the relative strength and direction of wind, sea, and current, out of the 79 stations occupied, the wire angle was 40° or greater at 20 of the stations, and of these the wire angle exceeded 45° at 12 stations.

The *Evergreen* departed Argentia on 28 April for the purpose of making a second current survey, the area to include the waters over and immediately seaward of the northeastern slope of the Grand Banks; and to occupy the triangle containing the branch point where the Labrador Current divides into its eastern and western branches. The survey was planned to begin with the counterclockwise occupation of the triangle beginning and ending at its northeastern corner and thence to work southeastward around the northeastern shoulder of the Grand Banks occupying an experimental network of stations between the triangle and Flemish Cap.

¹ Contribution No. 601 of the Woods Hole Oceanographic Institution.

Sailing, originally planned for 27 April, was postponed until the following day while a gale blew itself out. It was expected, therefore, that at least the first part of the survey could be carried out with quiet weather. This proved to be unwarranted optimism. The work of collection of data began at station 4386, located at 49°58' N., 48°58' W., on the afternoon of 29 April. At 1016 the following day it was necessary to heave to on account of weather. Operations were resumed at 0438 on 1 May. At 0746 on 1 May oceanographic work was interrupted while the *Evergreen* proceeded toward Fogo Island to assist in locating a man reported adrift on the ice. Oceanographic work was resumed 9 hours later. At 2135 on 3 May it was necessary to heave to again on account of weather, this time for 7½ hours. Weather again forced an interruption of the work on 8 May when the ship was hove to from 1251 to 1826. These interruptions do not tell the complete story of the boisterous weather which was a succession of gales. Of the 79 stations occupied, 19 were occupied in winds of force 6 or greater, including 4 with force 8. The final station of the survey, number 4464, located at 46°47.5' N., 44°51' W., was completed on the morning of 10 May. The *Evergreen* then proceeded to pick up a carboy of water at 45°41.5' N., 44°39' W., for use as a substandard of salinity. A course was then set for Argentina with arrival there on the morning of 12 May.

The *Evergreen* departed Argentina on the evening of 21 May to make a third current survey of the Grand Banks region. This survey was planned to cover the waters over and immediately seaward of the eastern and northeastern slopes of the Grand Banks, including occupations of sections T, U, and W, and extending to the area just northward of the latitude of Flemish Cap, with the work beginning at the southern end of the area and progressing northward. Accordingly the work of collection of data began at station 4465, located at 43°20' N., 50°15' W., on the early morning of 23 May. There was a delay of an hour and a half on the evening of 31 May while a defective electrode cable for the von Arx current meter was replaced. At 1136 on 3 June, after completion of station 4553, it was necessary to heave to an account of weather. Work was resumed at station 4554 at 0350 on 4 June. No further interruptions occurred and the work of collection of data was completed at station 4559, located at 47°13' N., 49°18' W., on the afternoon of 4 June. The *Evergreen* then proceeded to Boston, arriving there on the evening of 7 June.

Since the ice observation and ice patrol services had been discontinued for the season on 24 May because of the absence of ice in positions of potential hazard to shipping, no further current surveys of the Grand Banks area were made. The post-season

cruise began with the departure of the *Evergreen* from Port Union, Newfoundland, on the afternoon of 13 July. The oceanographic work included the occupation of three sections disposed in the form of a triangle with corners at approximately 50°00' N., 49°00' W.; 48°44' N., 52°58' W.; and 47°24' N., 50°00' W. The occupation of the triangle was followed by a repetition of the section across the Labrador Sea from South Wolf Island, Labrador, to Cape Farewell, Greenland. The work of collection of data on the post-season cruise began on the morning of 14 July at station 4560, located at 50°01.5' N., 48°58' W. The triangle was completed without incident at station 4589, located at 49°59.5' N., 48°58' W., on the morning of 17 July. The section across the Labrador Sea was begun at station 4590, located at 53°42.5' N., 55°46' W., on the evening of 18 July. Work progressed northeastward along the section without incident as far as station 4603, located at 56°36.5' N., 50°30' W., which was occupied on the evening of 20 July. From this station on winds from the easterly quadrants continued to freshen. Although progress was slow, work at stations continued until 2230 on 22 July when, after completing station 4610, located at 59°25' N., 44°49' W., the ship was hove to to await daylight. Progress was resumed at 0250 on 23 July and the work of collection of data was completed at station 4613, located at 59°43.5' N., 43°58' W., at 0818 on 23 July.

On the evening of 23 July a carboy of water for eventual use as a substandard of salinity was collected at 58°58' N., 45°23' W. After various diversions the *Evergreen* arrived at Woods Hole on the afternoon of 1 August to discharge oceanographic equipment and personnel and conclude the oceanographic field work for 1951.

The oceanographic work was under the supervision of Oceanographer Floyd M. Soule who was assisted by Lt. Peter S. Branson and Lt. (jg) Robertson P. Dinsmore.

In all, 307 stations were occupied during the season and post-season cruises. The 24 stations comprising the section across the Labrador Sea were occupied from the surface to as near bottom as was practicable. At the remaining 283 stations the observations extended to a depth of about 1,500 meters where the depth of water permitted. As in previous years the intended depths of observation, in meters, were 0, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1,000 and thence by 500-meter intervals. The dynamic topography has been referred to the 1,500-decibar surface for the section across the Labrador Sea. For all other stations, the dynamic heights have been referred to the 1,000-decibar surface.

Temperatures were measured with deep sea reversing thermometers, most of them of Richter and Wiese manufacture. Some of the protected thermometers were manufactured by Negretti and

Zambra, some by the GM Manufacturing Co., and some by the Kahl Scientific Instrument Corp. The depths of observation were based on Richter and Wiese unprotected thermometers.

The thermometers were used in pairs and a program was followed of periodically shifting the thermometers comprising the pairs. This provided a series of comparisons of each thermometer with several other thermometers and served not only to identify thermometers which were not functioning properly but also to determine consistent errors in the scale corrections in use and to ascertain the degree of precision of the temperature measurements. In judging this precision, 1,847 comparisons were considered. These gave a probable difference between the corrected readings of a pair of thermometers of $\pm 0.013^\circ \text{C}$. As many of the thermometers had recent laboratory comparisons with thermometers tested by the National Bureau of Standards and, as in most cases, the temperatures are the means of the corrected readings of a pair of thermometers, it is considered that the tabulated observed temperatures have a probable error of $\pm 0.01^\circ \text{C}$.

As in previous years, the routine salinity determinations were made with a Wenner salinity bridge which had been calibrated by the measurement of a series of samples whose salinities were assumed to be known from comparisons with Copenhagen standard water by means of silver nitrate titration.² Thus the accuracy of the tabulated observed salinities is only that permitted by silver nitrate titration although their precision is much better and probably about $\pm 0.005\text{‰}$. For the most part, the salinities are tabulated to the nearest 0.01‰ . Each cell of the bridge was standardized at the beginning and end of each run with a substandard of salinity from a carboy of sea water kept under an oil seal. Intermediate standardizations were made every 10 to 15 measurements. In addition, Copenhagen water was measured as an unknown one or more times during the run. These measurements of Copenhagen standard water were used to determine minor corrections to the salinities determined for each survey and to adjust the assumed value of the salinity of the carboy of sea water used as a substandard. None of the surveys required salinity corrections of as much as 0.005‰ and the figures illustrating the dynamic topography are in accordance with the tabulated temperatures and salinities.

² Since a substitution method is used, only relative conductivity is involved in the bridge calibration. If C is conductivity and A and B are constants and S is the salinity corresponding to conductivity C , then for the range of salinity from 30 to 40‰ the isothermal conductivity-salinity relationship may be approximated by $C = C' (A + BS)$. Early work by E. Ruppin (O. Krümmel, *Handbuch der Ozeanographie*, Band I, p. 291, Stuttgart, 1907) and A. L. Thurax (J. Acad. Sci., 8, p. 685, Washington, 1918) resulted in mean values such that $C = C_{35} (0.10925 + 0.02545 S)$. More recent work by Thomas, Thompson, and Utterback (1934), as digested by Lafond in U. S. Navy Hydrographic Office Publication No. 614, results in a similar expression for this range of salinity at a temperature of 25°C . of $C = C_{35} (0.11055 + 0.025361 S)$. From the 1950 calibration of the salinity bridge, made at a temperature of about 28.9°C ., the similar expression derived was $C = C_{35} (0.11436 + 0.025304 S)$.

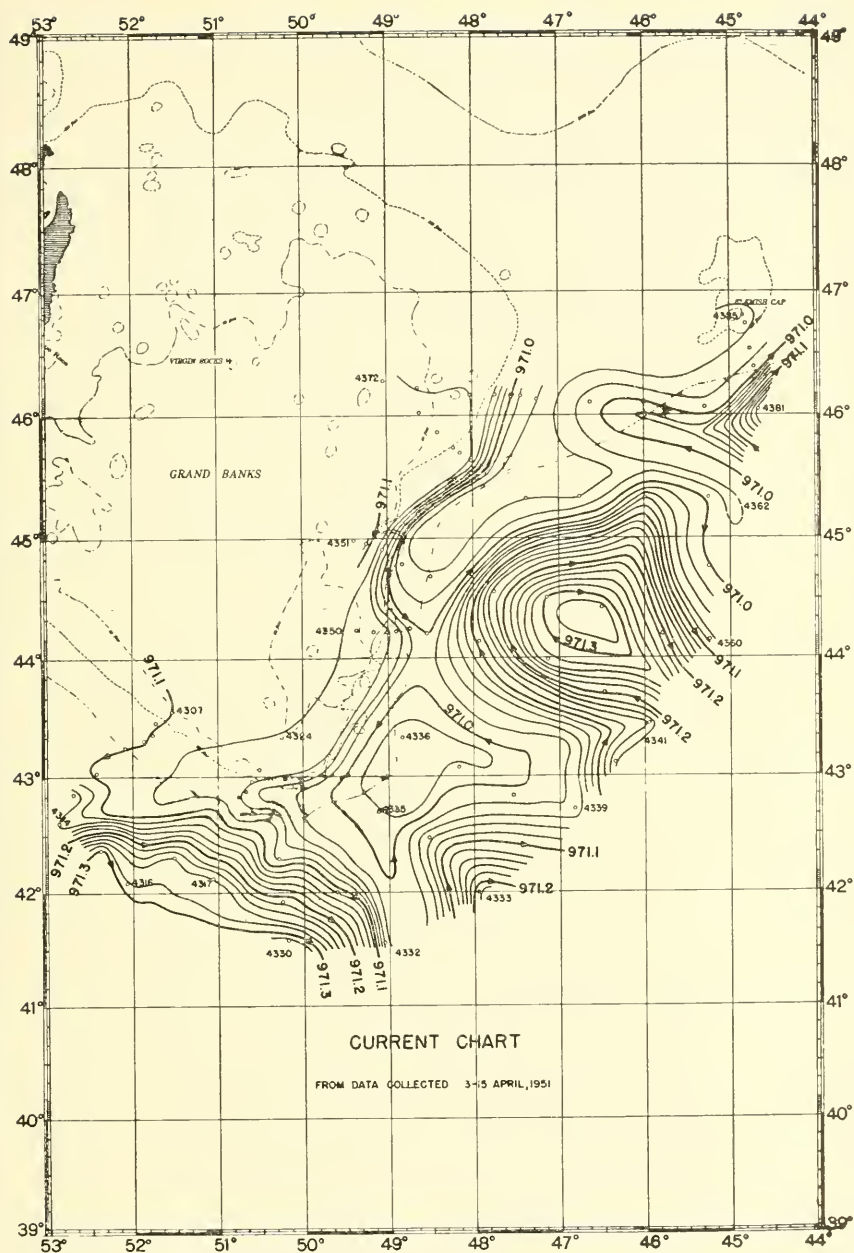


FIGURE 7.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 3–15 April, 1951. Oceanographic station positions are indicated and the station numbers given at turning points.

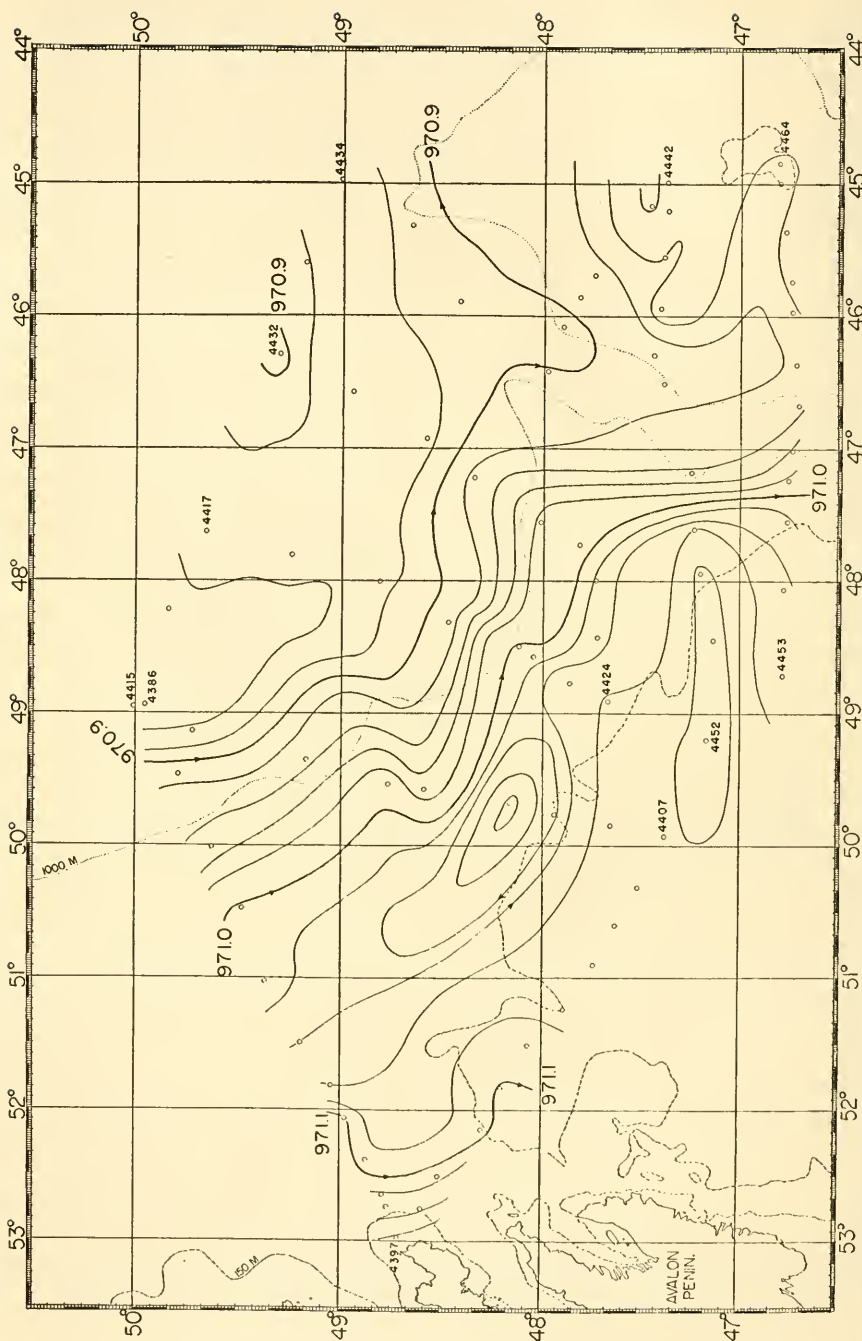


FIGURE 8.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 29 April to 10 May 1951. Oceanographic station positions are indicated and the station numbers given at turning points.

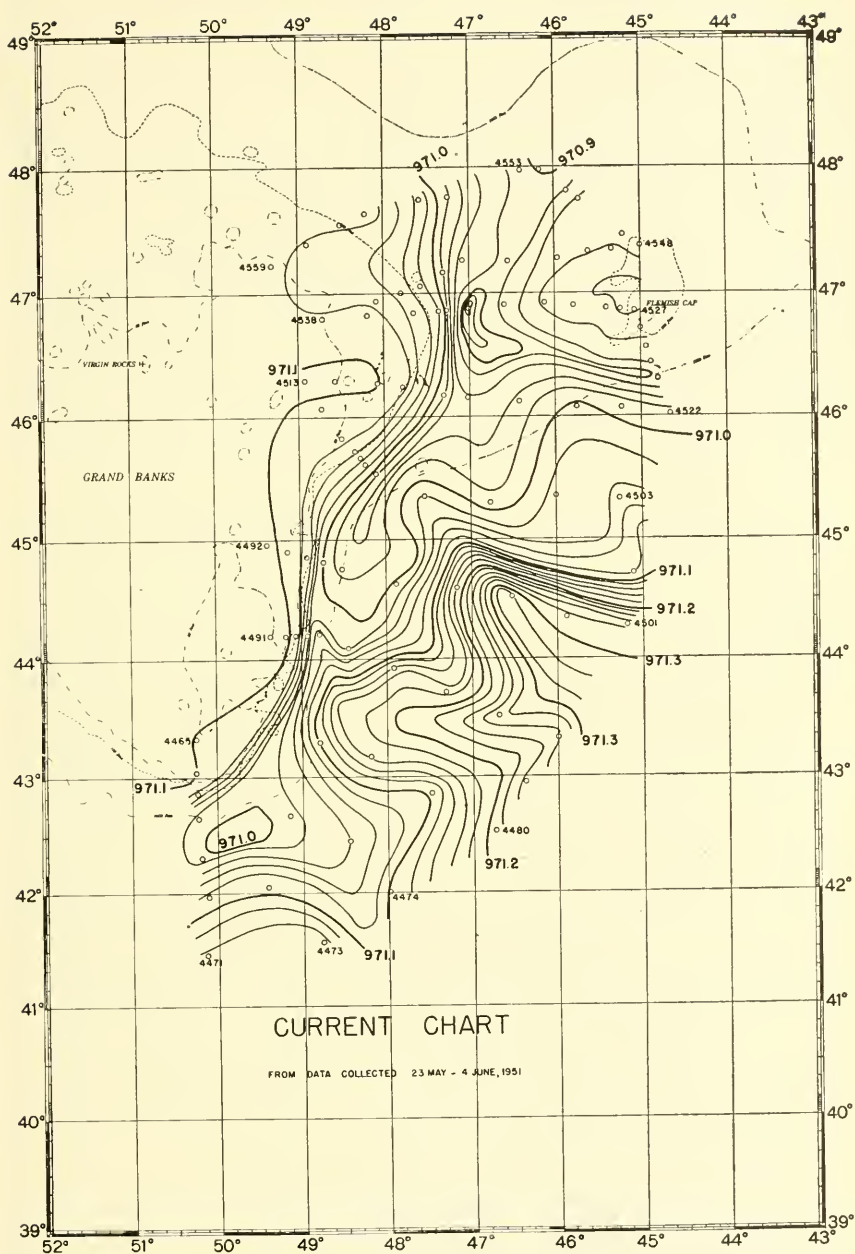


FIGURE 9.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 23 May to 4 June 1951. Oceanographic station positions are indicated and the station numbers given at turning points.

Figures 7, 8 and 9 show the dynamic topography of the sea surface relative to the 1,000-decibar surface as found during the first, second and third surveys respectively. In figure 7 the margins of the Atlantic Current are to be seen in the southwestern part of the surveyed area, in the salient whose axis points northwestward from 44° N., 46° W., and again at the 46th parallel just southward of Flemish Cap. The salient, which is the dominating feature of figure 7, seems to have been effective in blocking the southward flow of the Labrador Current. The shape of the salient in figure 7 is not such as to produce the considerable diversion of the Labrador Current eastward north of the 44th parallel which is shown in the chart. However, what past evidence is available indicates that such salients or meanders progress in a northeasterly direction and it is probable that the diversion of the Labrador Current was accomplished at some time prior to the first survey when the Atlantic Current salient was centered more to the southwest.

Had any bergs been in the area immediately northward of that covered by this survey figure 7 would have indicated two potential danger areas for close surveillance by the patrol. One of these, at the southern edge of the surveyed area, was in the neighborhood of the 49th meridian where bergs might have moved southward after following the eastern edge of the Grand Banks. The other was centered at about 45° N., 45° W., where bergs diverted eastward north of 44° N., could again move south and southeastward toward the steamer lanes of the North Atlantic Track Agreement. Very little Labrador Current, however, reached southward of the 44th parallel and an outstanding feature of this survey, not shown by the dynamic topography, was the exceptionally high temperature of the water in the area. Negative temperatures were found at only 15 of the 79 stations and all of these were north of 44° N. The number of stations at which temperatures lower than 3° C. were found was 32, and those where temperatures were in excess of 15° C. totaled 17. These figures are to be compared with a similar cruise in 1950 when, of 69 stations occupied, 47 had temperatures below 3° , 34 had negative temperatures, and 3 had temperatures above 15° .

The second survey was made in an area from which relatively few previous observations are available. Our knowledge of the circulation here is based largely on inference. From the 1,000-meter isobath in figure 8 it will be seen that a large part of the area is situated in shallow water so that, if the dynamic topography is to be referred to the 1,000-decibar surface, 57 of the 79 stations must be adjusted for their shallow depth. Thus the picture of circulation deduced from the density distribution and

shown in figure 8 does not have a reliability comparable to that of the dynamic topographic charts of the adjacent area to the south.

The western part of the surveyed area containing the triangle beginning at station 4386 and with corners at stations 4397 and 4407 and closing at station 4415 is comparable to the earlier occupations of this triangle in 1948, 1949, and 1950. Considering this triangle in this survey it would appear that any bergs entering the area and crossing the 49th parallel east of about 51° W., would follow the eastern branch of the Labrador Current, that those crossing this parallel west of about $51^{\circ}50'$ W., would follow the western branch, and that those crossing at intermediate longitudes would strand on the northern edge of the Grand Banks or be set in toward the banks at about the 47th parallel. Of those following the eastern branch, bergs crossing the 49th parallel eastward of $48^{\circ}50'$ W., would drift eastward and northeastward north of the latitude of Flemish Cap.

The dynamic topographic chart resulting from the third survey, figure 9, presents a different picture from that of the first survey made about 7 weeks earlier. In the third survey Labrador Current water was reaching the Tail of the Banks. The Atlantic Current water salient, while not having the strength nor the high temperatures encountered during the first survey, was still prominent and effective in diverting eastward some of the Labrador Current water northward of the 44th parallel. Were it not for the absence of bergs entering the area, figure 9 would have indicated midseason conditions with danger areas southwestward of the Tail of the Banks, southward of the surveyed area at about longitude 48° W., and eastward of the surveyed area north of about latitude $44^{\circ}30'$ N. The northern part of the surveyed area overlaps the southeastern part of the area covered by the second survey and comparisons of the results of the two surveys in this area will be made in the discussion of the volumes of flow of the Labrador Current.

It should be noted that in the past there has been evidence of a gradual progress northeastward of meanders such as the salient of Atlantic Current water. The rate of progression has been estimated to be of the order of magnitude of a few miles a day. With an interval of about 7 weeks elapsing between the first and third surveys, one might expect that the meanders found during the first survey would be displaced perhaps 200 miles to the northeastward in the third survey. Thus there is no assurance that the salient of Atlantic Current water found during the third survey is the same meander shown in figure 7. If it is, we have here an unusual case of stagnation or stability of current pattern.

Certain sections across the Labrador Current in the Grand Banks region have been repeatedly occupied in the process of making current surveys during the ice patrol season over the period of years beginning with 1934 and the accumulated data form the basis for establishing seasonal normals for this part of the year, and a means of comparing the Labrador Current found during any survey with that found during another. The sections have been designated T, U, and W which are located as follows: section T running southeasterly from about $46^{\circ}20'$ N., $49^{\circ}00'$ W.; section U extending eastward from the Grand Banks at about the 45th parallel; and section W running southerly off the Grand Banks at about the 50th meridian. In bulletin number 36 of this series, tentative normal seasonal variation curves were published for the volume of flow and the mean temperature of the Labrador Current at each of these sections. In the following discussion, the units used in volume transport are millions of cubic meters per second, mean temperature and minimum observed temperature are given in degrees Centigrade, and the heat transport is expressed in units of millions of cubic meter degrees Centigrade per second.

Only the first and third surveys included occupations of sections T, U, and W. However, other sections located northward of section T and for which normals have not been established were occupied during the second and third cruises and on the post-season cruise. On the second cruise the triangle off Cape Bonavista was occupied and the sections forming its sides have been designated NW, SW, and SE to indicate the northwest, southwest, and southeast sides respectively. A section running easterly from the Grand Banks to Flemish Cap was occupied and has been called section F and two sections running northeasterly from the Grand Banks intermediate between section F and the Bonavista triangle have been called G and H. On the third cruise sections F and G were occupied in addition to T, U, and W and on the post-season cruise the Bonavista triangle was occupied in addition to the section across the Labrador sea from South Wolf Island to Cape Farewell, Greenland. No seasonal variation normals are available for the Labrador Current off South Wolf Island, but the section has been occupied in the summer time in 14 of the 24 years beginning with 1928 (see p. 89, Bulletin No. 36 of this series). In the absence of normals for this section, the values found in 1951 have been compared with the averages of these 14 occupations.

In table 1 the results obtained in 1951 have been summarized and compared with normal values where they are available. From table 1 it is apparent that during both the first and third surveys the volume of flow of the Labrador Current in the Grand Banks

Table 1. Summary of velocity sections across Labrador Current occupied in 1951

Section	Volume transport			Mean temperature			Min. observed temp.			Heat transport		
	1951	Normal	Anomaly	1951	Normal	Anomaly	1951	Normal	Anomaly	1951	Normal	Anomaly
1st survey:												
T.....	2.74	3.55	-0.61	1.90	1.95	-0.05	-1.28	-1.41	+0.13	5.20	6.92	-1.72
U.....	3.21	5.28	-2.07	1.71	1.55	+0.16	-1.11	-1.22	+0.11	5.50	8.18	-2.68
W.....	0.21	4.24	-4.03	1.59	2.11	-0.52	+1.42	-0.53	+1.95	0.34	8.95	-8.61
2d survey:												
NW.....	3.48			1.19			-1.64			4.15		
SW.....	0.61			-0.71			-1.58			-0.43		
SE.....	2.52			1.23			-1.33			3.09		
U.....	3.34			2.24			-1.08			7.48		
G.....	2.81			2.06			-1.17			5.79		
F.....	1.66			1.97			-1.12			3.27		
3d survey:												
G.....	2.99			2.21			-1.29			6.60		
F.....	3.33			1.90			-1.24			6.31		
T.....	1.35	2.65	-1.30	1.14	2.90	-0.16	-0.86	-1.57	+0.71	1.53	7.68	-6.15
U.....	2.07	3.82	-1.75	1.89	2.36	-0.47	-1.29	-1.24	-0.05	3.92	9.02	-5.10
W.....	2.18	4.13	-1.95	3.53	3.16	+0.37	-0.42	-0.40	-0.02	7.70	13.05	-5.35
Post season:												
NW.....	4.39			1.67			-1.58			7.33		
SW.....	0.61			1.17			-1.56			0.72		
SE.....	3.55			1.79			-1.57			6.35		
S. Wolf Island.....	5.30	4.27	+1.03	2.63	2.47	+0.16	-1.34			13.93	11.19	+2.74

region was subnormal. The departures from normal mean temperature are not as striking and the subnormality of the heat transport is attributed to the reduced volume transport. Sections U and W were expected to show smaller than normal transports because of the diversion of the Labrador Current by the Atlantic Current salient as shown in figures 7 and 9, but it is evident from table 1 that the amount of Labrador Current reaching section T also was less than normal. The minimum observed temperatures were somewhat warmer than normal.

Considering the Bonavista triangle, during the second survey about 80 percent of the water entering the triangle followed the eastern branch of the Labrador Current. Approximately 85 percent followed this branch during the post-season cruise. The volume transport past section G was about the same during the second and third surveys, but a considerable part of this water recurved northeastward north of section F during the second survey whereas this diversion occurred farther south in the third survey. The circulation deduced from the values given in Table 1 is shown schematically in figure 10 for each of the surveys made in 1951. The computed figures for volume transport have been rounded to the nearest 0.1 million cu. m/sec. and adjusted for the triangles so that the sum of the transport past sections SW and SE equals the transport past section NW³. In the first survey it is considered that the increase in volume at section U over that at section T is the result of a contribution from the west, rather than a closed eddy on the east, because of the lower mean temperature found at section U. The recirculation of water in the closed eddy centered near 43° N., 49° W., in figure 7 seems, from the low mean temperature found at section W, not to have extended as far westward as this section.

In the second survey, the greater flow past section H than that at either sections SE or G indicates additional circulation associated with the margins of the Labrador Sea, as does also the higher mean temperature.

In the third survey the addition of water from the westward between sections G and F, resulting in the lower mean temperature at section F, is an indication that this water is not associated with the Grand Banks eddy which by the first of June has undergone appreciable warming. Similarly the addition of water from the Grand Banks between sections T and U is called upon to explain the higher mean temperature at the latter section rather than

³ Regarding the reliability of the computed volumes of transport, it should be noted that a consistent error of 0.01 ‰ in salinity at one of a pair of stations will produce an error in the dynamic height of that station of about 7.2 dynamic mm and an error of about 0.36×10^6 cu. m/sec. in the volume of flow between the two stations if 1,000 decibars is the reference surface. These errors become 10.8 dynamic mm and 0.81×10^6 cu. m/sec. respectively if 1,500 decibars is the reference surface.

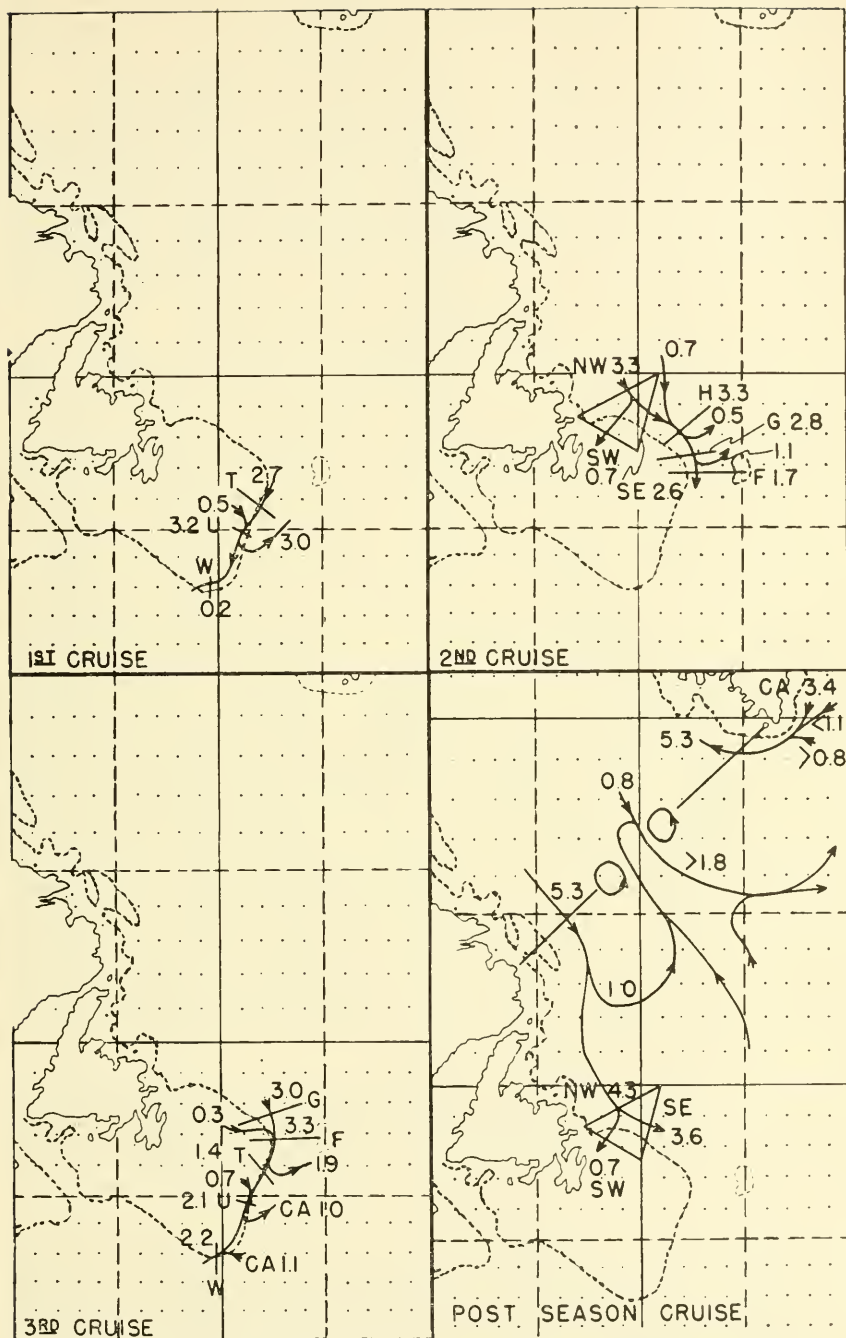


FIGURE 10.—Schematic representation of circulation deduced from sections occupied during 1951. Numerals indicate volume transport in units of $\text{cu. m/sec.} \times 10^{-6}$.

interpreting the higher volume at section U as being the result of recirculation of mixed water from the eastward. The marked increase in mean temperature at section W indicates the presence of a considerable proportion of recirculating mixed water.

Except for noting the increase in transport at the Bonavista triangle during the post-season cruise over that found during the second survey, and the higher than average transport (both volume and heat) and mean temperature at the South Wolf Island section, discussion of the circulation found during the post-season cruise will be deferred until after the data on the complete South Wolf-Cape Farewell section have been presented.

The temperature-salinity relationships found in the past in the Grand Banks region at levels below 75 meters have established the Labrador Current water and the Atlantic Current water as water masses, and usually the mixed water derived from these water masses has been sufficiently uniform to permit it to be considered as a virtual water mass. The T-S curves for individual stations occupied during the first and third surveys have been examined and classified as Labrador Current water, mixed water, or Atlantic Current water. During the first survey a small group of stations classified as mixed water followed a consistent pattern similar to the characteristic mixed water found in the past. The remaining mixed water stations, however, had T-S curves which varied from normal mixed water to nearly Atlantic Current water, indicating the presence of water mixed from the parent water masses in varying proportions. The stations at which the abnormal mixed water was found formed a belt bordering the Atlantic Current water and extended to the edge of the Grand Banks on its southwestern slope. The area containing stations at which the usual mixed water was found extended from the Tail of the Banks to Flemish Cap as a zone between the abnormal mixed water and the Labrador Current water. During the third survey no such belt of abnormal mixed water was found.⁴

In figure 11 the T-S relationships found during 1951 have been shown for each of the three water masses in comparison with similar T-S curves representing the mean of conditions found during the 8-year period 1934-41. In drawing the curve for

⁴ Since individual station curves are not identical, a check was made to determine whether or not the mixed water was a virtual water mass and not merely an apparent water mass derived from the bias of earlier work. The probable departures of temperature and salinity, at a given level at an individual station, from temperature and salinity at that level on the mean curves shown in figure 11 were computed for each level for each mean curve for 1951. These probable differences were then used as the axes of ellipses constructed with their centers at the appropriate level on the mean curve. While the ellipse patterns overlapped, each mean curve fell outside the envelopes of the ellipses of the other two curves. Taken level for level the ellipses of the three curves did not overlap except at 600 meters and below for mixed water and Labrador Current water, and at 1,500 meters for mixed water and Atlantic Current water. It was concluded that in 1951 the mixed water was a virtual water mass.

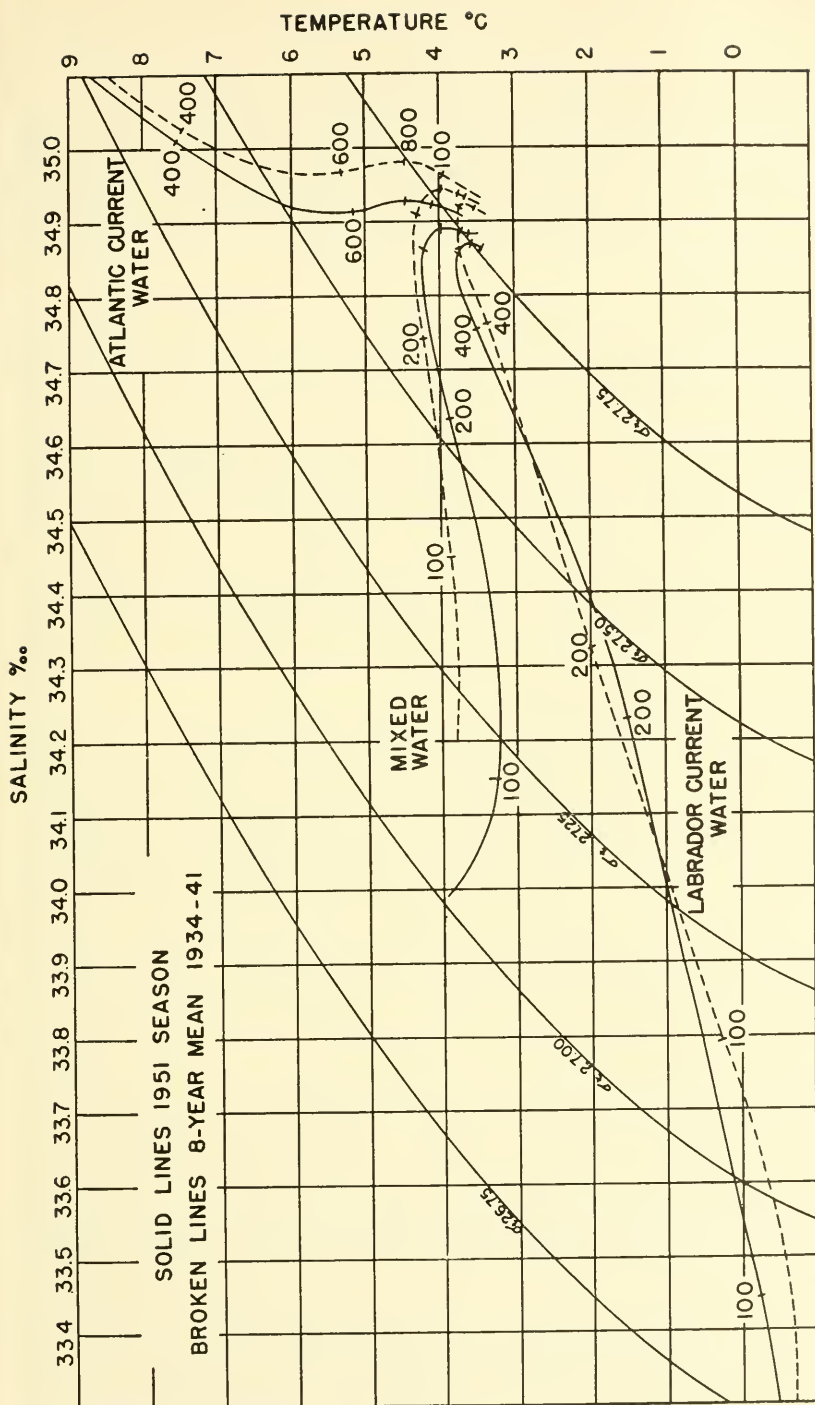


FIGURE 11.—Temperature-salinity relationships for Labrador Current water, Atlantic Current water, and mixed water found in the Grand Banks region. Solid lines show conditions during the 1951 season and broken lines represent the 8-year mean for the period 1934-41. An approximate depth scale in meters is given.

mixed water for 1951 the abnormal mixed water found during the first survey was excluded from consideration. An approximate depth scale in meters is shown on each curve in figure 11. It will be seen from figure 11 that, level for level, each water mass was lighter during 1951 than the 8-year mean and that lower salinities were responsible for these differences in densities. The differences were greater in the upper levels than in the deeper levels, but they still averaged 0.02 to 0.03 in σ_t between 400 and 1,000 meters.

The second survey was not included in the analysis of the T-S relationships of the water masses of the Grand Banks region inasmuch as the data considered previously were from the area south of Flemish Cap. The stations lying seaward of the Labrador Current in the second survey were examined to find out whether they approximated the characteristics of the mixed water of the Grand Banks region. Only stations 4440 to 4445 and 4459 to 4464 did. These 12 stations were located in the vicinity of Flemish Cap and lie in the region where the dynamic topography indicates the water entered the area from the Grand Banks region farther to the south. It is considered probable that the characteristic mixed water of the Grand Banks region is not formed northward of Flemish Cap.

In comparing the results of the von Arx current meter (geomagnetic electrokinetograph, abbreviated GEK) with the currents deduced from density distribution a method was presented in Bulletin No. 34 of this series wherein the currents as measured by GEK during the run between two oceanographic stations were converted into an equivalent difference in dynamic height at the two stations using the expression $\Delta D = 0.01391 LC \sin \phi_m$ where ΔD is the difference in dynamic height in dynamic meters between two points separated by a distance L nautical miles, C is the average component of the current normal to the line between stations expressed in nautical miles per hour and ϕ_m is the mean latitude.

If C is not zero there is an angular difference Θ between the ship's heading and the course made good. The jog component M_j measured by GEK is normal to the ship's heading. We require the component C normal to the course made good. L and ϕ_m are known. Let the mean component of the current in the direction of the ship's heading be M_c (derived from the values computed each half hour). Let the time elapsed during the run be t hours. The mean M_j can be derived from scaling the trace at short intervals of time. The total movement of the ship from the current acting during t is subtracted vectorially from L at the station of arrival to reach the dead

reckoned point of arrival and from it the dead reckoned distance R and the angle Θ . From figure 12:

$$M_J t / L = \sin \Theta = Ct / R \text{ or } R = LCt / M_J t$$

$$\text{also} \quad (M_c t + R) / L = \cos \Theta$$

$$\text{whence} \quad (M_c t + R)^2 = L^2 - M_J^2 t^2$$

substituting the value of R and rearranging:

$$CL = M_J (\sqrt{L^2 - M_J^2 t^2} - M_c t)$$

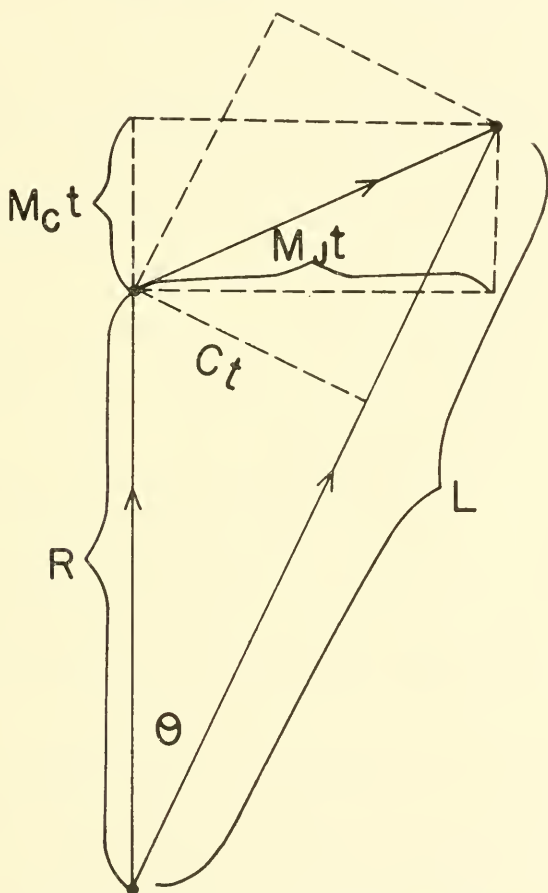


FIGURE 12.—Derivation of CL in terms of measured components.

This expression is general if the convention is adopted that M_c is positive if directed with the ship's heading and negative if counter to the ship's heading.

In earlier comparisons only general agreement had been obtained between currents derived from GEK measurements and density distribution. In addition to the possibility that one or more of the various assumptions made might be significantly erroneous, it was recognized that in contrast with the average

conditions represented by the dynamic topography, instantaneous current vectors would result from the GEK observations. These were considered to be the sum of the steady state and the momentary value of fluctuating currents. The fluctuating currents were expected to include periodic currents, such as tidal currents, and aperiodic currents, such as transient wind effects. To simplify the interpretation of the comparison as far as possible the first part of the June survey of 1950 was selected as having been made during exceptionally quiet weather when wind effects were assumed to have been negligibly small.

The above described method was used to compute equivalent differences in dynamic height, station to station, from the GEK observations (ΔD GEK) for stations 4175 to 4205 and compared with the differences in dynamic height of the surface above the 1,000-decibar surface (ΔD 1,000 dcb). The disagreement between the GEK and dynamic topography was of the same order of magnitude as in the 1948 measurements. To see if there were any relation between ΔD GEK and the density distribution two plots were made, one of ΔD GEK — ΔD 1,000 dcb versus ΔD 1,000 dcb, and the other ΔD GEK — ΔD 1,000 dcb versus gradient as determined from the dynamic topography. Both plots showed a random distribution of points with no evident relationship.

In order to study the general trend of ΔD GEK, cumulative plots were made of ΔD GEK, ΔD 1,000 dcb, ΔD 1,500 dcb and ΔD 2,000 dcb against distance. These plots showed that, although in general the profile of the sea surface thus constructed from the various derivations of ΔD tended to be similar, errors at any one point were masked by the fact that the curves were displaced from one another because of the cumulative differences in the values for each station interval.

To better examine the station to station differences, lines of ΔD GEK — ΔD 1,000 dcb, ΔD GEK — ΔD 1,500 dcb, ΔD GEK — ΔD 2,000 dcb and ΔD GEK (uncorrected for drift) — ΔD 1,000 dcb were plotted against distance. Disregarding the magnitude of the proportionality constant, there was little to choose between the different reference levels of dynamic computation in comparison with the GEK. Observations permitting the use of the deeper reference levels, however, were available only from the southern part of the survey. This southern section showed, surprisingly enough, that variations between the GEK and the dynamic heights were smallest in the area of shoalest water, a finding which is probably coincidental.

The proportionality factor of the current meter varied widely from station to station and was less than unity at 22 of the 30

interstation intervals as compared to the usually accepted values of unity or greater.

The average value of ΔD GEK — ΔD 1,000 dcb was computed to be $+ 8.6$ dynamic mm with a probable departure from average of ± 103.2 mm. The average interstation interval was $28\frac{1}{2}$ miles. When the equivalent difference in dynamic height was uncorrected for drift the average became $+ 7.7 \pm 107.6$ dynamic mm. From this it is concluded that the correction for drift is unimportant and need not be considered until the larger sources of discrepancy have been remedied.

By applying the cumulative values of ΔD GEK to the dynamic height at station 4175, quasi-dynamic heights were computed for the remainder of the stations and a chart of dynamic topography was drawn using these values. Comparison of this chart with one drawn exclusively from density considerations showed agreement only in the coarsest features of the circulation pattern and this method of constructing a current chart was not considered satisfactory.

In order to distribute the discrepancies between ΔD GEK and ΔD 1,000 dcb and thus preserve more of the circulation pattern found by considering only the density distribution, the computed quasi-dynamic heights were set equal to the dynamic heights at four points, stations 4175, 4185, 4195 and 4205, and the differences proportioned between these stations by adjusting ΔD GEK. This method produced a current chart which was closer to the chart constructed from density computations, but which still left much to be desired.

If a major source of the discrepancies was the measurement by dynamic topography of the steady state, as compared with the measurement by the current meter of the sum of the steady state and the fluctuating currents; and if, because of the weak winds which characterized this particular survey, the aperiodic currents were a negligible part of the fluctuating currents; then the discrepancies might be expected to represent in large measure the periodic fluctuations. An analysis was therefore undertaken as follows. The GEK current vectors, usually determined each half hour, were superimposed on the dynamic topographic chart and at each of these points the geostrophic current vector was scaled from the chart. The vector differences were then resolved into their north-south and east-west components and plotted against time beginning at station 4175. For the first 2 days there seemed to be a poorly defined period of about 18 hours in the north-south component. No other periods were apparent from inspection of the curves. If the errors of measurement contributed a negligibly small part to the discrepancies between the GEK measurements and the dynamic

topography, these results may indicate that the periodic currents of periods of more than a few hours were small enough to have been masked by larger aperiodic fluctuations, or that the area considered was large enough to include geographical differences in the periodic currents.

Since direction of the GEK vector is better than its magnitude, some means of constructing a current chart was sought in which the complete vector was used instead of using only one component of the vector.

The method of producing a current chart from current vectors gotten from the GEK is essentially the determination of the stream function (ψ) for many points on the chart. Contouring the chart for lines of equal value of the stream function will result in a current pattern, since the stream function is defined by this premise. The validity of the results depends on three major assumptions: that the GEK vectors are truly representative of the current, that the currents over the survey area are horizontal and free from vertical motion, and that the points at which a GEK current fix is obtained are spaced closely enough to permit representative sampling of all important spatial current fluctuations.

The first assumption is dependent upon the instrument and is reasonably safe in that sufficient observations have shown a good correspondence between GEK vectors and true currents.

The second assumption of horizontal flow is also an assumption in the computation of currents by the method of dynamic topography. However, there is a difference in that in computing the stream function any errors introduced due to divergence will be cumulative from station to station and may become very important after a number of stations if not kept under control. Maintaining control of the divergence is an important phase which is reflected both in laying out the track of the survey and the method of computing the stream function.

The third assumption of adequate sampling merely requires that GEK stations be made frequently along a track line such that all major current variations are in evidence.

The stream function (ψ) of fluid flow at a point x, y is defined mathematically as:

$$\psi_{x, y} = \int_{x_0, y_0}^{x, y} (u \, dy - v \, dx)$$

where x_0, y_0 is an arbitrary starting point where $\psi = 0$; u and v are the x and y components respectively of the velocity.

If the GEK stations are spaced closely enough along a track line

such that no important features of the current pattern are missed, the equation then becomes:

$$\psi_{x,y} = \sum_{x_0, y_0}^{x, y} (u \Delta y - v \Delta x)$$

where u and v are the average x and y components of the velocity over the distance Δy and Δx .

The basic procedure is first to resolve the current vectors into x and y components and then numerically integrate along the track line from station to station beginning from an arbitrarily chosen starting station where ψ is let equal to zero. This series of computations will result in values of ψ for each station.

Where the track line crosses or approaches upon itself or returns to the starting point will serve as a test of the three assumptions since the value of ψ must be the same. If the values do not agree, then steps must be taken to bring them into accord. This may be done by discarding certain questionable vectors, by assigning relative weights to more desirable vectors, or by apportioning the difference over a segment of the track line which would give the best fit.

A similar method is to divide the survey into a grid of x and y lines. Each row of squares is denoted by a value of b and each column of squares by a . The size of the square is dependent on the interval of the stations and the scale of the chart. All the components falling within each square are averaged and assumed to apply at the midpoint of the square. Δx and Δy may then be equated to unity and the computations performed as before. This method expedites the process and averages out random errors, but may tend to smooth out true currents over a greater width than they actually occupy.

An intensive survey over a small area where the track line crosses many times provides numerous instances where ψ must be brought back into agreement with previously determined values. To do this by trial and error may become very laborious and often impossible. A method employing a statistical approach devised by Pritchard ⁵ is herein summarized for practical application to this case. This method determines the most probable value of the stream function for each midpoint of a grid such as described in the preceding paragraph. Values of ψ_x and ψ_y for each square are found by interpolation from the equations:

$$(\psi_y)_{a, b+\frac{1}{2}} = \sum_{y=0}^{y=b} u \Delta y \text{ and } (\psi_x)_{a+\frac{1}{2}, b} = \sum_{x=0}^{x=a} v \Delta x$$

⁵ Pritchard, D. W., "Streamlines from a discrete vector field," Jour. Mar. Res. Vol. VII, pp. 296-303, New Haven, 1948.

The notation used herein has been changed to avoid confusion.

A separate value of ψ_y and ψ_x is thus computed for each square, there being n squares in the x direction and m squares in the y direction. ψ_x and ψ_y must now be composed to produce the complete stream function for each square. Theory for this process utilizes the statistical method of least squares to obtain a distribution of ψ which will best fit the observed data. This derivation is not shown but the result is to compute constants of Aa and Bb which when added respectively to ψ_x and ψ_y determine ψ . The constants of A (A_1, A_2, \dots) are computed for each horizontal row ($b = 1, b = 2, \dots$) by the formula:

$$A_b = \left(\sum_{a=1}^{a=n} \psi_y - \sum_{a=1}^{a=n} \psi_x - \sum_{a=1}^{a=n} \psi_{x(b=1)} - \sum_{a=1}^{a=n} \psi_{y(b=1)} \right) / n$$

and constants of B (B_1, B_2, \dots) are computed for each vertical column ($a = 1, a = 2, \dots$) by the formula:

$$B_a = \left(\sum_{b=1}^{b=m} \psi_x - \sum_{b=1}^{b=m} \psi_y + \sum_{b=1}^{b=m} A \right) / m$$

Then the stream function may be computed from the following equation:

$$\psi_{a, b} = \psi_{x(a, b)} + A_b = \psi_{y(a, b)} + B_a$$

If the three primary assumptions are strictly true, then a value of ψ obtained from either equation will be the same. In practice, however, this will rarely be true and the mean is considered to be the most probable value.

Once the stream function has been determined for each square or station, the current map is produced by contouring the chart along lines of equal ψ in multiples of 5, 10, or 20 to suit the scale of the chart. The contours or streamlines will, of course, show the current direction at a particular position. The speed of the current is represented by the crowding of the streamlines, and is computed by dividing the interval of the streamline units by the distance between the streamlines in units which were used for Δx and Δy . These units may be any convenient arbitrarily selected units of length.

Current charts utilizing the above methods have agreed rather well with maps of dynamic topography made simultaneously. The former reflect to a much greater degree transitory and tidal currents.

It should be noted that in producing a map by directly integrating current components from station to station, the cumulative error may reach such proportions as to produce a fictitious overall picture, while smaller areas will be reasonably valid when studied separately.

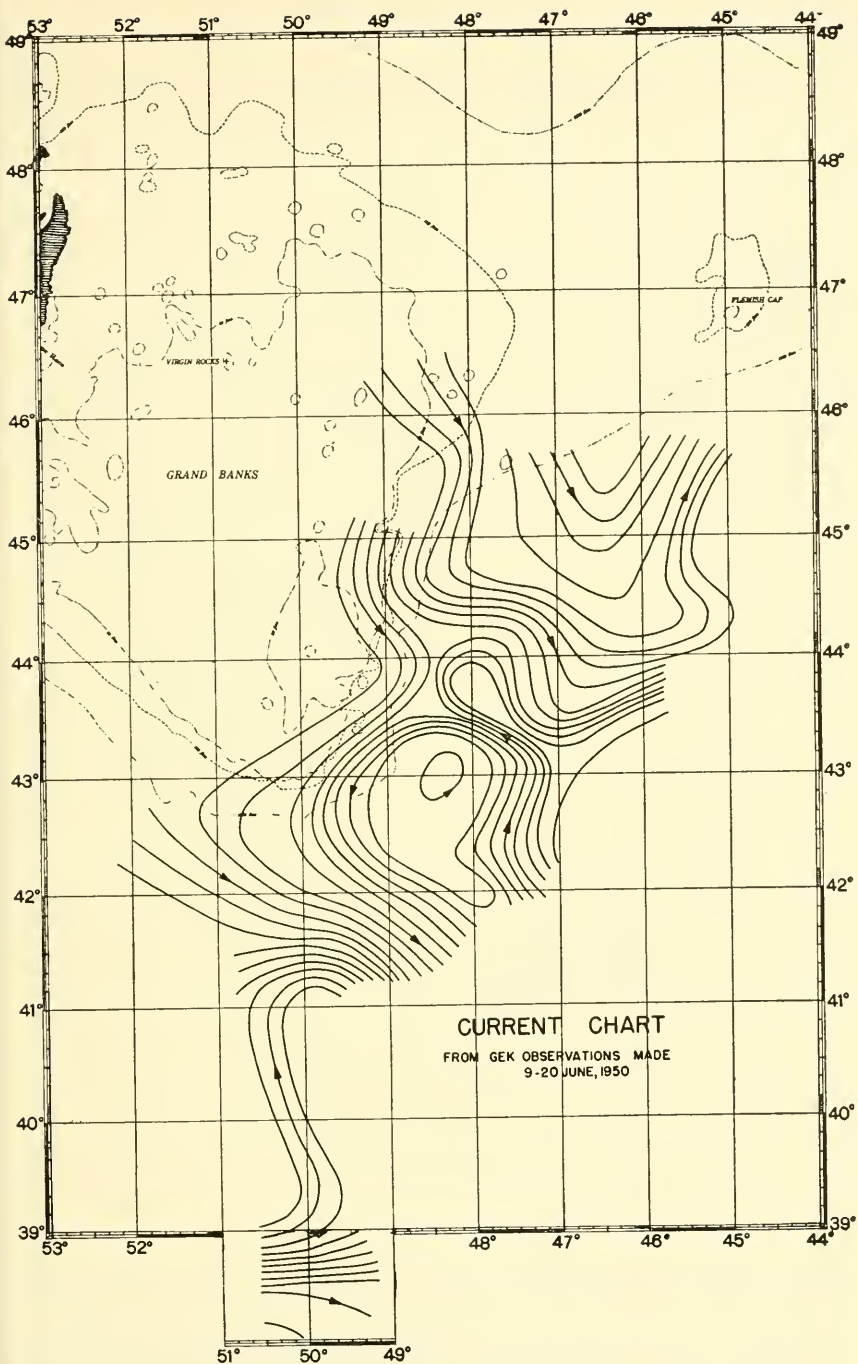


FIGURE 13.—Current chart constructed by contouring the stream function as derived from observations made with the von Arx current meter (GK) 9–20 June 1950. Speed in knots is 6.9 divided by distance between contours in minutes of longitude.

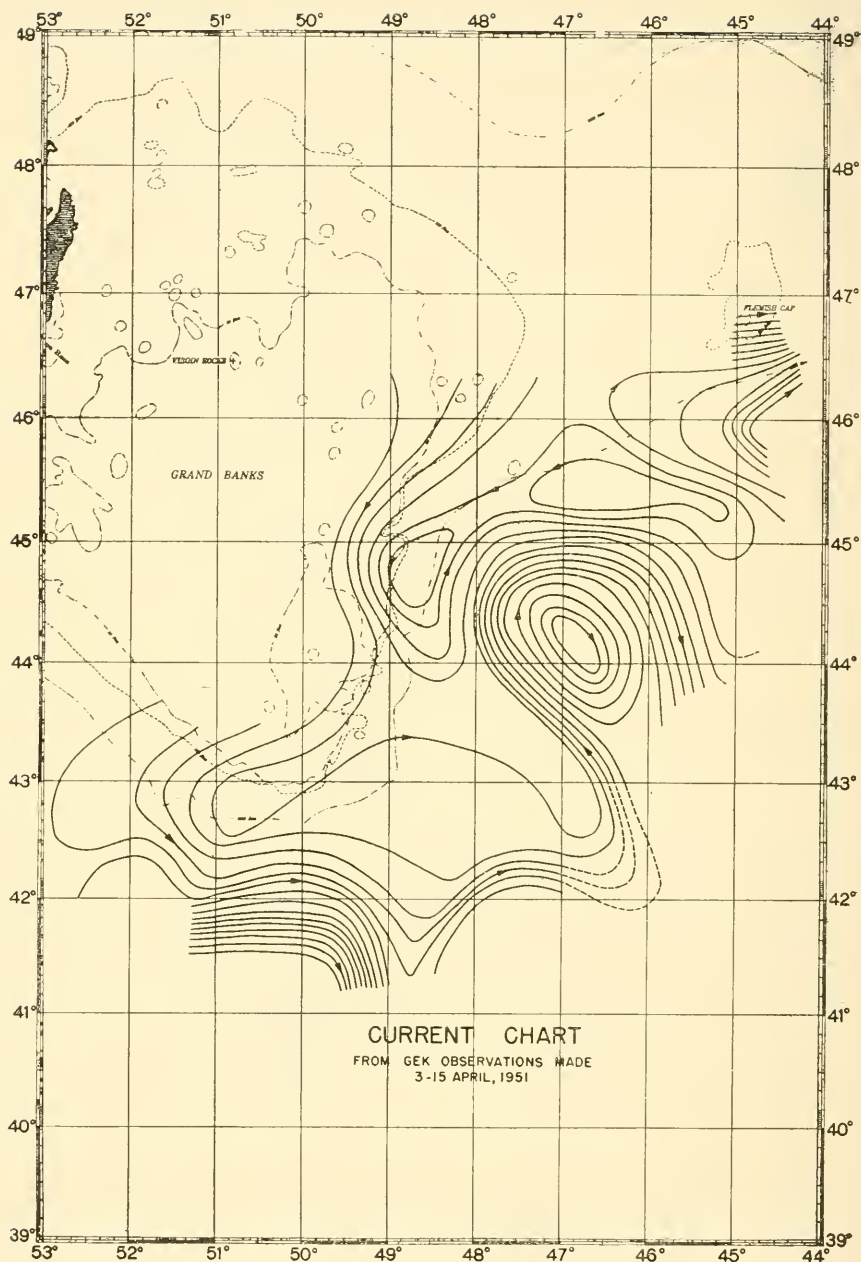


FIGURE 14.—Current chart constructed by contouring the stream function as derived from observations made with the von Arx current meter (GK) 3–15 April 1951. Speed in knots is 5.4 divided by distance between contours in minutes of longitude.

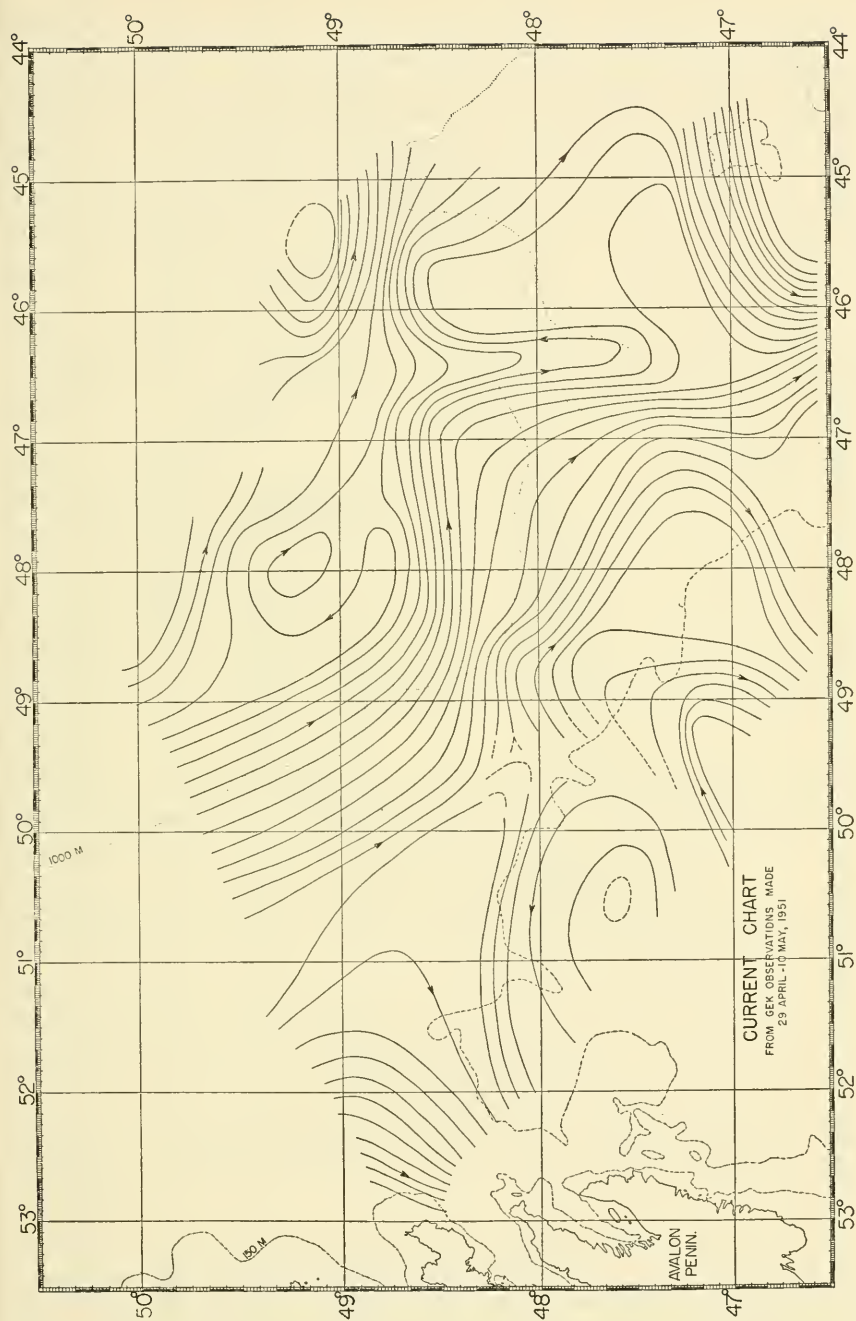


FIGURE 15.—Current chart constructed by contouring the stream function as derived from observations made with the von Arx current meter (G.E.K.) 29 April–10 May 1951. Speed in knots is 2.9 divided by distance between contours in minutes of longitude.

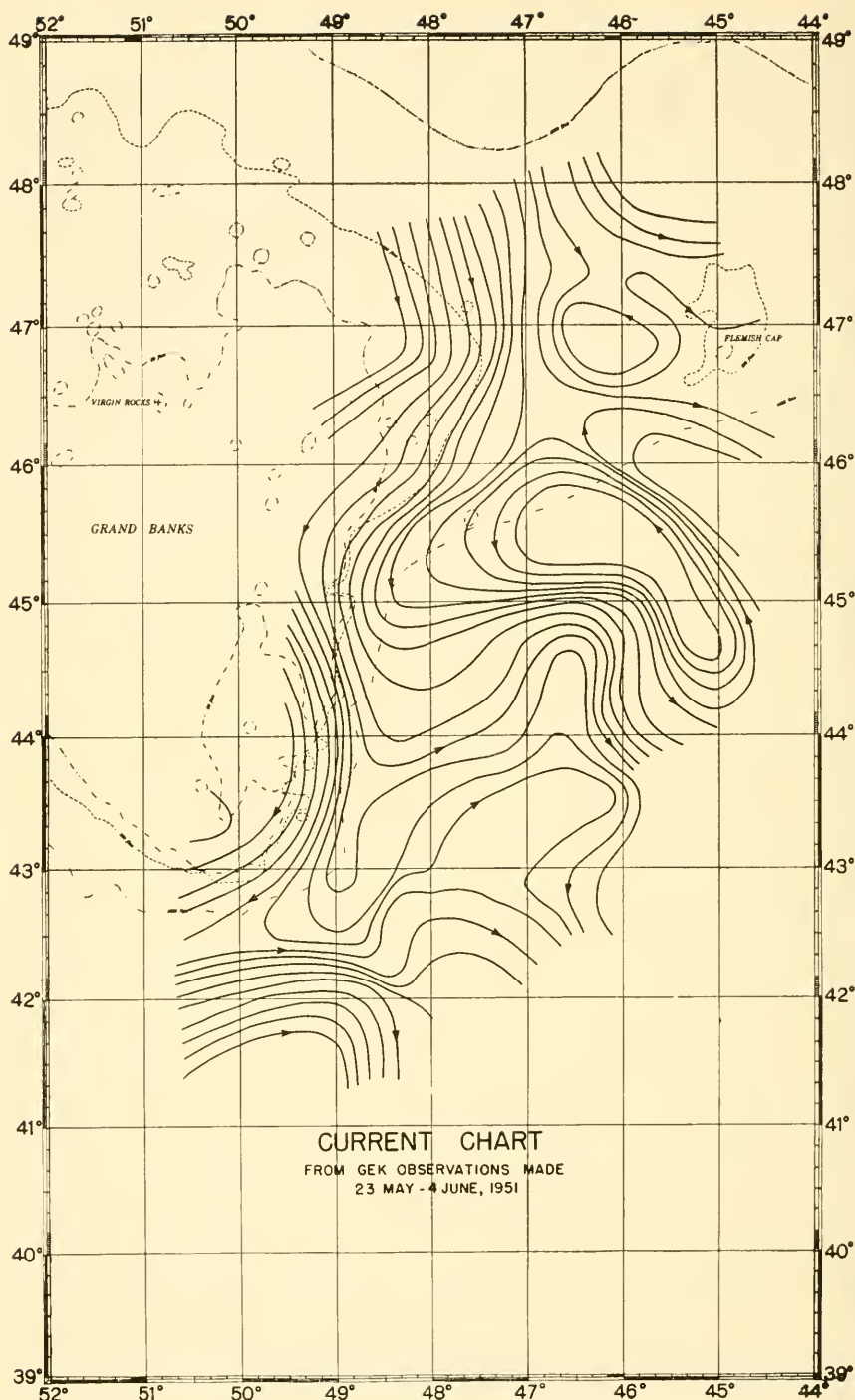


FIGURE 16.—Current chart constructed by contouring the stream function as derived from observations made with the von Arx current meter (GK) 23 May–4 June 1951. Speed in knots is 5.4 divided by distance between contours in minutes of longitude.

Using the procedure described above, current charts have been constructed from the GEK vectors observed during the surveys made 9–20 June 1950, 3–15 April 1951, 29 April–10 May 1951, and 23 May–4 June 1951. The resulting charts are shown in figures 13 to 16 and are to be compared with the dynamic topographic charts shown in figure 18, Bulletin No. 36 of this series, and figures 7, 8, and 9 of this bulletin. In preparing figures 13 to 16, no correction has been applied to the magnitudes of the GEK vectors for the departure of the proportionality factor from unity or of the vertical intensity of the earth's magnetic field from 50,000 γ . The current speeds indicated by the GEK charts, therefore, are not exact but the directions and current patterns should be comparable to those shown in the charts of dynamic topography.

In figure 13 the difference in current pattern from that shown by the dynamic topography are greatest in the vicinity of 43° N., 49° W., and near 45° N., 47° W. Near the eastern edge of the Grand Banks at about 45° N., figure 13 shows a number of contour lines which are not present farther north. While the sources of such a discrepancy include the possibility of cumulative error of the GEK vectors and convergent flow, probably a major source is the treatment as synoptic a series of observations of fluctuating currents made over a considerable period of time. The relative speed of the current near the southern extreme of the survey is lower than expected and may be an instance of the smoothing out of peak velocities arising from the averaging process described above.

Figure 14 shows a difference in current pattern from that of figure 7 in the area near 43° N., 49° W., and marked differences in relative speed shown by these figures are present in the extreme western and northeastern parts of the surveyed area.

In comparing figure 15 with figure 8, we find general agreement in the eastern branch of the Labrador Current and disagreement in the vicinity of Flemish Cap and Cape Bonavista. In each of these cases the disagreement is considered to be the result of periodic fluctuating currents. It is to be noted that the disagreement between the GEK and dynamic topography seems to be no worse for this survey than for the southern part of the survey made in June 1950, although the latter was made during exceptionally quiet weather and the former during exceptionally boisterous weather.

The comparison of figure 16 with figure 9 shows areas of disagreement near 43° N., 48° W., and 46° N., 46° W. While it is noted that the areas of disagreement consistently occur along the outer margins of the North Atlantic Current in the four charts presented here, the degree of consistency is insufficient to warrant conclusions as to the principal cause of the disagreements.

In previous bulletins of this series the position of the outer boundary of the North Atlantic Current water in the Grand Banks region has been reported and related to factors assumed to be associated with the relative strengths of the North Atlantic Current and the Labrador Current. The boundary has been taken as the horizontal projection of the line of intersection of the isothermal surface of 6° and the isohaline surface of $34.950/_{00}$. As the boundary is characteristically sinuous, its position has been described by the area between it and reference rhumb lines made up of the 45th parallel from the boundary to 49° W., the 49th meridian thence to 43° N., and a line from 43° N., 49° W., through 42° N., 47° W., extended to the boundary. To compensate for the effect of the Labrador Current on the position of the boundary, the area was adjusted by the subtraction of 10,000 square kilometers for each million cubic meters per second volume of flow of the Labrador Current past section U. The adjusted area was assumed to represent effects on the position of the boundary the causes of which were associated with the North Atlantic eddy. A further assumption was made that changes in the strength of the Gulf Stream were proportional to changes in the difference in sea level between Bermuda and Charleston, S. C. Monthly mean sea levels at each of these stations, corrected to normal barometric pressure for the station, were used to derive a value for the change in difference in sea level by taking sea level at Charleston minus the departure from average at Bermuda. Over the period from 1934 to 1941 a good correlation was found to exist between the sea level difference, Charleston, minus the Bermuda departure, and the adjusted area in the Grand Banks region $13\frac{1}{2}$ months later. During this period 27 surveys gave the relation

$$A = 6.8(H - 5.07) + 1.34$$

where A is the adjusted area in units of 10,000 square kilometers and H is the sea level difference Charleston minus the Bermuda departure, in feet.

Since resumption of the oceanographic program of the International Ice Patrol after World War II eight surveys of the Grand Banks region have been made, one in 1948, two in 1949, three in 1950, and two in 1951. These surveys show a poorer correlation, with three of the eight cases showing a discrepancy as to sign. The differences between the post-war series and the earlier series are large enough to suggest a revision of the above expression for the relationship between the adjusted area and the sea level difference.

Before deriving a new expression for A , consideration was given to the changes in conditions and to their physical significance. If a true relationship exists, it should apply to both series of observations. The fact that the relationship depends on the departure

from normal of the difference in sea level across the Bermuda-Charleston section focuses attention on that normal. No extended uninterrupted series of tide gauge records exist for the Bermuda end of the section and so it is not yet possible to draw any conclusions regarding changes in mean sea level at that end of the section. At the Charleston end of the section tide gauge records have continued with reference to the same bench mark since the fall of 1921. They show an increase in sea level with an abrupt rise of about 0.14 foot between 1932 and 1933 to a mean value of 5.07 for the 8-year period 1933-40 (used in studying the relationship with the 27 surveys made 1934-41) with a further increase to a mean of 5.40 for the 4-year period 1947-50 (used in connection with the 8 recent surveys made during 1948-51). It is not known whether sea level at both ends of the section rose or whether the change occurred only at the Charleston end. Nor is it known what part of the change at Charleston represents a sinking of the coast. This is believed to be of a smaller order of magnitude. It is also considered that the rate of change of total volume of water in the oceans is negligibly small. If the sinking of the coast can be neglected and if most of the changes in sea level across the section take place at the outer edge of the North Atlantic eddy, the change can be interpreted as indicating a weaker circulation of the Gulf Stream system during the post-war period. Examination of the tide gauge records, therefore, indicate that the figure of 5.07 may continue to be used as the normal sea level from which departures may be considered.

In the Grand Banks sector of the North Atlantic eddy the outer margin of North Atlantic Current water, as defined by the unadjusted area, was somewhat nearer the center of the eddy but maintained a position which averaged nearly the same for the post-war period as for the earlier period (7.1×10^4 as compared with 6.8×10^4 square kilometers). During the post-war period the volume of flow of the Labrador Current past section U has been decidedly subnormal compared with the earlier period (about 3.0 as compared with about 6.8×10^6 cu.m/sec.). Qualitatively, then, these changes are in agreement, with the position of the boundary in the Grand Banks sector undergoing little change since both the Labrador Current and the North Atlantic eddy were weaker than previously.

If a contraction of the boundary of the North Atlantic eddy follows weakening of the circulation in the eddy, the peripheral branches fed by the eddy might be expected to be profoundly affected by such a contraction, especially if the branching is conditioned by the configuration of the land or bottom. The Irminger Current, recurving to the westward in the vicinity of Iceland, contributes Atlantic water to make the West Greenland Current a

relatively warm current. Observations of the West Greenland Current off Cape Farewell have been made during each of 14 summertime occupations of the section extending from the Labrador coast to Cape Farewell. These include 6 of the 8 years 1934-41 and each of the 4 years 1948-51. The Irminger Current component of the West Greenland Current was subnormal in 1948 and almost totally absent from this section in each of the three subsequent years. This agrees qualitatively with the conception of a contracted weakened North Atlantic eddy.

It has been concluded, therefore, that the differences between conditions found during the post-war period and the earlier period do not represent permanent changes but more probably represent longer period departures from normal. In computing the relationship between the adjusted area A and the sea level difference, Charleston-Bermuda departure, H , the previous normal value of $H = 5.07$ has been used in combining all observations to derive the expression

$$A = 6.4(H - 5.07) + 1.85$$

for computing the adjusted area with a probable error of $\pm 1.9 \times 10^4$ square kilometers. In figure 17 the values of A computed by the use of this formula are shown as circles connected by broken lines and are compared with the values of A derived by adjusting the observed area by the subtraction of the volume of flow of the Labrador Current past section U. The latter are shown as black dots and are connected by solid lines. The shape of the connecting lines follows the changes in H . In arriving at the "observed" values of A there are several possible sources of error such as in estimating the location of the boundary in those parts of a survey where the boundary is outside the limits of the survey, and in determining the volume of flow of the Labrador Current past section U, and in assuming that that part of the volume of flow past section U which is water from the Grand Banks eddy is of importance equal to that of the true Labrador Current in determining the position of the boundary. In arriving at the computed values of A , all modifying factors which may be interposed in $13\frac{1}{2}$ months and along 1,500 miles have been neglected. For example, no account has been taken of the possible development in or progress through the Grand Banks sector of a meander. In view of these uncertainties, the agreement between the observed and computed values of A is considered to be good.

In the studies that thus far have been made of the triangle off Cape Bonavista one of the points of interest which has received attention is whether or not the area is one in which the current pattern at the surface is sufficiently similar to that at subsurface levels to permit the movement of deep draft bergs to be deduced

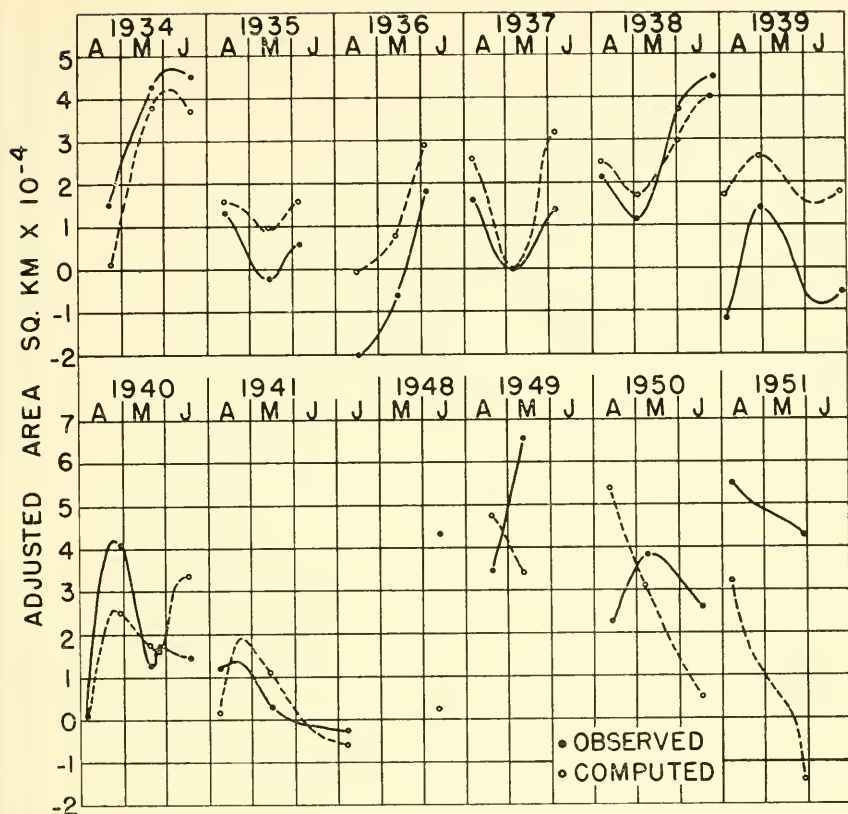


FIGURE 17.—Correspondence between adjusted area in Grand Banks sector and sea level difference, Charlston-Bermuda departure, 13½ months earlier. Dots show adjusted area derived from observed boundary. Circles show adjusted area computed from $A = 6.4(H - 5.07) + 1.85$. Shape of curves derived from changes in H .

from a consideration of the dynamic topography of the sea surface alone. The dynamic topography at the 100-decibar surface has been compared with that at the surface in surveys made in previous years and in general the current patterns have been found to be similar. The current patterns found at the surface and at the 100-decibar surface have been compared and found to be similar for each of the two occupations of the triangle made in 1951. The dynamic topography of the surface found during the second cruise has been shown in figure 8. That found during the post-season cruise is shown in figure 18. The dynamic topography of the sea surface obtained from the triangle indicates that any bergs entering the area from the north would have followed the eastern branch of the Labrador Current if they had crossed the 49th parallel eastward of about 53° W., whereas those crossing the 49th parallel westward of that longitude would have either followed the western branch or stranded on the northern slope of the Grand Banks. It

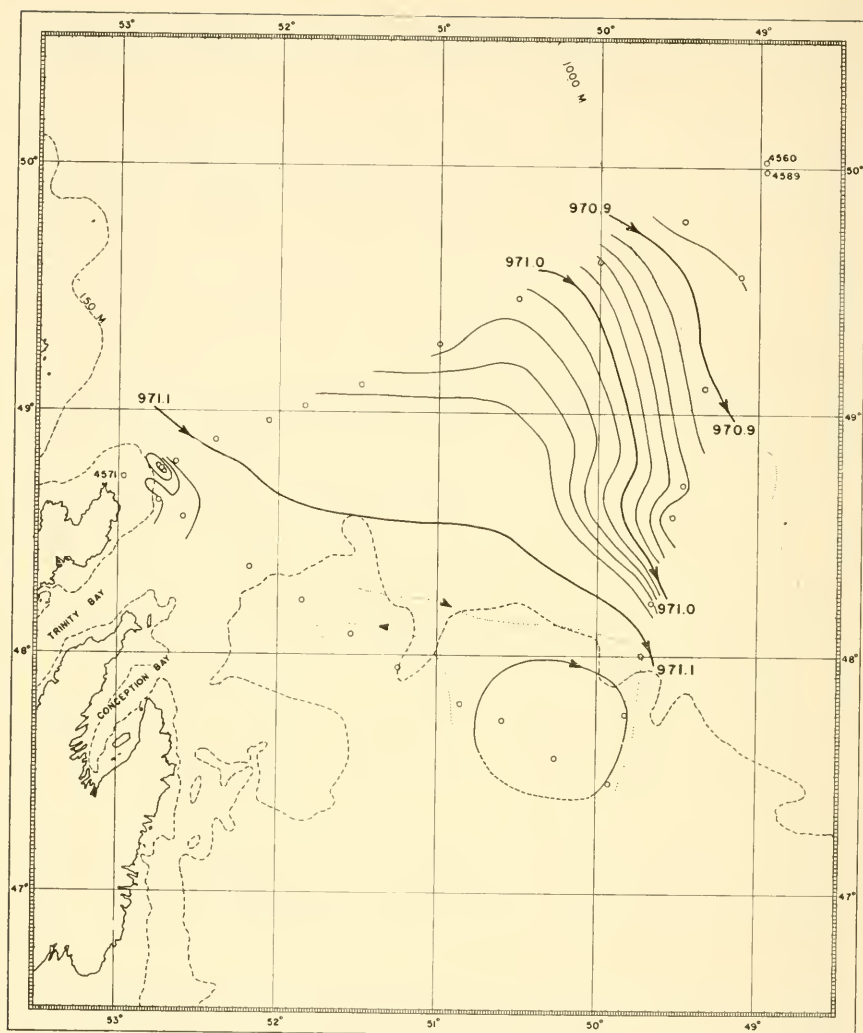


FIGURE 18.—Dynamic topography of the sea surface relative to the 1000-decibar surface from data collected 14–17 July 1951. Oceanographic station positions are indicated and the station numbers given at turning points.

is noted also, that the topography indicates that some of the bergs following the eastern branch would have stranded on the north-eastern shoulder of the Grand Banks between about 48° N., and $47^{\circ}30'$ N.

The von Arx current meter was operated on the run from Port Union to the first station of the triangle (number 4560). As this run was very nearly over the reverse path followed in occupying the first section of the triangle (stations 4560 to 4571) the two sets of current vectors are comparable except as to time. The differences obtained verify the existence here of transitory (probably tidal) currents.

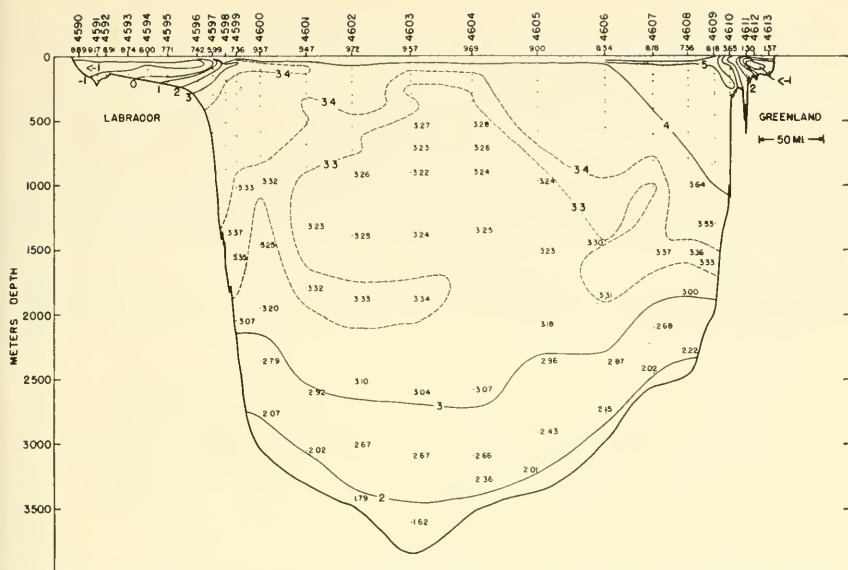


FIGURE 19.—Temperature distribution between South Wolf Island, Labrador, and Cape Farewell, Greenland, 18–23 July 1951.

Figure 19 shows the temperature distribution along the section across the Labrador Sea from South Wolf Island, Labrador, to Cape Farewell, Greenland, from data collected during the post-season cruise of 1951. The temperature minimum layer which characterizes the Labrador Current over the shelf was not as cold as usual. The warm tongue which extends inshore and downward to the continental slope beneath the core of the Labrador Current is to be seen in figure 19 between the 3.4° isotherms. This tongue contained maximum temperatures slightly warmer than 3.5° and thus was colder than usual by several tenths of a degree. The temperature minimum which is a feature of the intermediate water of the Labrador Sea in summer was somewhat warmer than the usual 3.17° . The warmer offshore part of the West Greenland Current, usually contributed by the Irminger Current, was colder than usual again with temperatures exceeding 5° only in a small tongue extending inshore and downward toward the edge of the shelf at station 4610. Temperatures as high as 6° were not found except in the upper 50 meters.

The deficiency of Irminger Current water indicated by the subnormal temperatures of the West Greenland Current is also shown in figure 20 by the subnormal salinity of this part of the West Greenland Current. This figure shows the salinity distribution found in 1951 along the Greenland end of the South Wolf Island-Cape Farewell section. The salinity maximum, which was remarkably constant at $35.04^{\circ}/_{00}$ until 1949, was only $34.96^{\circ}/_{00}$ in 1951 as compared with 34.97 in 1949 and 34.99 in 1950. The small

of the North Atlantic eddy entering and leaving the Labrador Sea. There is also an indication of a weak counterclockwise eddy between this water and the West Greenland Current.

The volume of flow, mean temperature, and heat transport of the Labrador Current past this section has already been presented

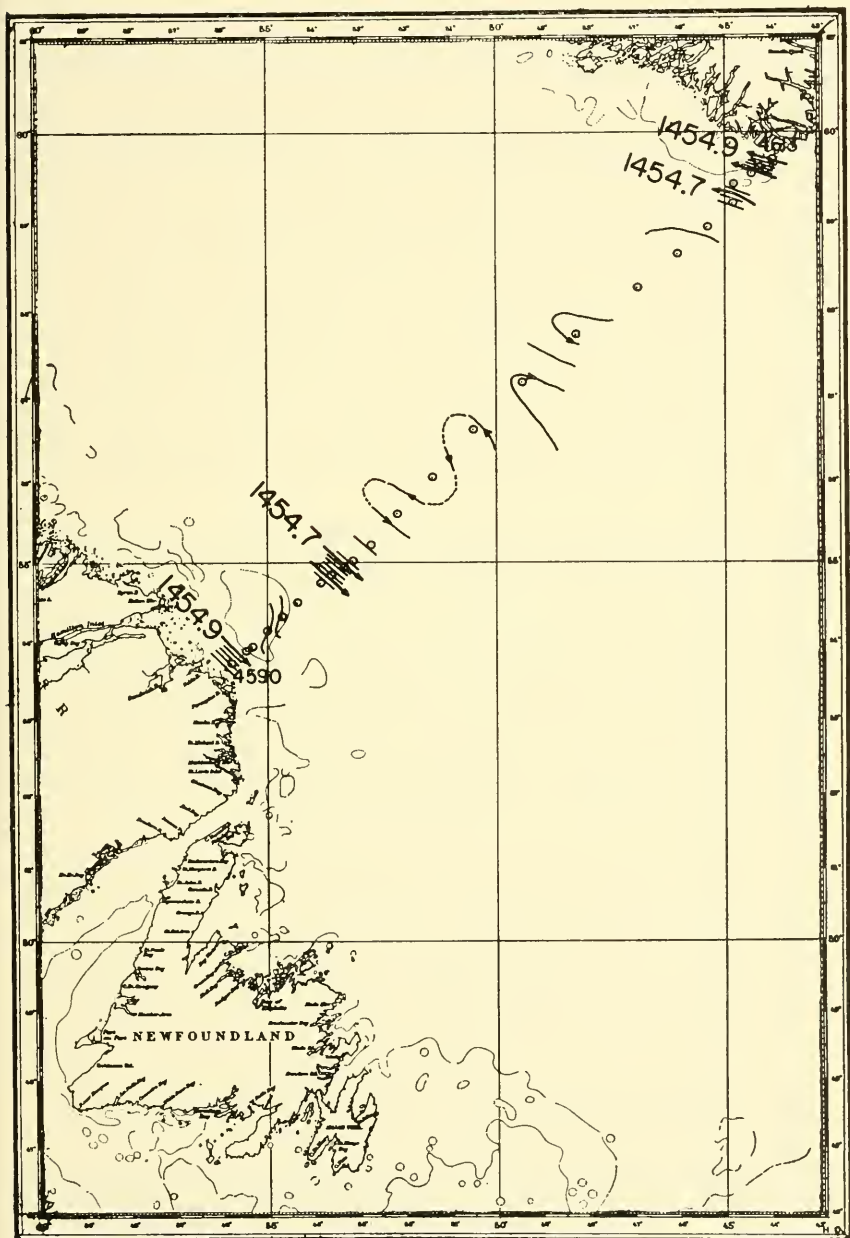


FIGURE 21.—Dynamic topography of the sea surface relative to the 1500-decibar surface, from data collected 18-23 July 1951.

in table 1 and discussed in connection with other measurements of the Labrador Current. The rest of the section has been examined in a similar manner. The West Greenland Current, which lies between approximately station 4605 and the beach at Cape Farewell, was computed to have a volume of flow of 5.28 million cu.m/sec., a mean temperature of 3.68° C and a heat transport of 19.41 million cu.m. degrees C/sec. These units will be used in the remainder of the discussion without further repetition. In Bulletin No. 35 of this series mean curves of seasonal variation were presented for the volume of flow of the West Greenland Current and its components of East Greenland Current (assumed to have a constant mean temperature of 3.2° C) and of Irminger Current (assumed to have a constant mean temperature of 5.5° C). If these curves are taken as normals, then for the time of year when the section was occupied in 1951 the normal volume of flow would have been 4.48 (made up of 1.47 East Greenland Current water and 3.01 Irminger Current water) with a mean temperature of 4.74° C, and a heat transport of 21.26. Thus in 1951 the West Greenland Current was above normal in volume transport and subnormal in mean temperature and slightly subnormal in heat transport.

A critical examination of the velocity section, however, leads to the conclusion that of the 5.28 volume of flow of the West Greenland Current only the inshore 4.50 is contributed from the north-eastward of Cape Farewell and at least 0.78 is a more direct contribution from the waters nearby and to the southeastward of Cape Farewell. The volume transport of 4.50 is therefore considered to include the contributions from the East Greenland Current and the Irminger Current and may possibly also include some water from the outer margins of the North Atlantic eddy which has recurved westward before reaching the vicinity of Iceland. The mean temperature of the 4.50 volume of flow was 3.77° . Assuming the same constant mean temperatures of the East Greenland Current and Irminger Current components which were used in deriving the mean seasonal variation curves we arrive at the volume transports of 3.38 and less than 1.12 for the contributions from the East Greenland and Irminger Currents respectively. These values are to be compared with the seasonal normals of 1.47 and 3.01 mentioned above. Reference is made to figure 10 for a schematic representation of the circulation deduced above.

Between the outer margins of the Labrador Current and the West Greenland Current there was computed to be a net southeasterly flow of 0.81. This is considered to have its origin in the early recurving of the outer margin of the West Greenland Current passing the Cape Farewell section. Thus the net flow out of the Labrador Sea at this section exceeded the inflow past the

section by about 0.8, which represents the contributions through the northern openings less such an amount as sank below the reference surface of 1,500 decibars.

SUMMARY

1. The surface circulation in the Grand Banks region in 1951 has been discussed on the basis of three dynamic topographic charts made during the season.

2. A more detailed picture of the circulation in the upper 1,000 meters in the Grand Banks region has been presented on the basis of volume of flow, mean temperature, and minimum observed temperature of the Labrador Current at 14 occupations of 8 selected sections made during the 1951 season.

3. The temperature-salinity relationships for the three water masses found in the Grand Banks region in 1951 have been compared with conditions found in other years.

4. Observations made with a von Arx geomagnetic electrokinetograph in 1950 and 1951 have been given further study in comparison with the dynamic topography based on concurrently collected temperature and salinity observations. A method of applying the stream function to the construction of a contoured current chart from the GEK vectors has been described and four charts made by its use have been presented.

5. The relationship between the location of the northern boundary of North Atlantic Current water in the Grand Banks region, the strength of the Labrador Current, and the changes in the difference in sea-level between Bermuda and Charleston have been reviewed in the light of 27 surveys made during the period 1934-41 and 8 surveys made 1948-51. A weakened post-war circulation in the North Atlantic eddy, deduced from changes in the sea level difference at the Bermuda-Charleston section, has been proposed as a possible explanation for the deficiency of the Irminger Current component of the West Greenland Current at Cape Farewell.

6. An increase in temperature of the intermediate water of the Labrador Sea in 1951 over 1950 has been noted and the thermal characteristics of the section from South Wolf Island, Labrador, to Cape Farewell, Greenland, have been compared with those found in earlier occupations of this section.

7. The circulation in the southern part of the Labrador Sea has been inferred from examination of the volume transport and mean temperature of the Labrador Current and West Greenland Current and, with the supporting evidence of temperature and salinity observations, it has been concluded that the Irminger Current component of the West Greenland Current continued to be deficient in 1951.

The data collected during the 1951 season and post-season cruises are tabulated below. The individual station headings give the station number, date, geographical position, depth of water, and the dynamic height of the sea surface used in the construction of the dynamic topographic charts shown in figures 7, 8, 9, 18, and 21. The depths of water are uncorrected sonic soundings based on a sounding velocity of 800 fathoms per second. Where the depths of the scaled values are enclosed in parentheses, the data are based on extrapolated vertical distribution curves of temperature or salinity or both. Asterisks appearing before observed temperatures indicate that these temperatures were determined from the depth of reversal and the corrected reading of an unprotected thermometer. The symbol σ_t signifies 1,000 (density — 1) at atmospheric pressure and temperature t .

Table of Oceanographic Data

STATIONS OCCUPIED IN 1951

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4307; Apr. 3; latitude 43°32.5' N., longitude 51°32' W.; depth 89 meters, dynamic height 971.100							Station 4311; Apr. 4; latitude 43°15.5' N., longitude 52°06' W.; depth 1,737 meters, dynamic height 971.099						
0.....	2.17	33.41	0.....	2.17	33.41	26.72	0.....	8.78	34.47	0.....	8.78	34.47	26.77
26.....	3.87	32.97	25.....	3.80	32.98	26.22	25.....	8.79	34.47	25.....	8.79	34.47	26.76
51.....	7.98	34.18	50.....	7.70	34.13	26.65	49.....	8.80	34.47	50.....	8.80	34.47	26.76
77.....	9.63	34.78	75.....	9.55	34.75	26.85	73.....	8.82	34.57	75.....	8.80	34.57	26.84
Station 4308; Apr. 3; latitude 43°27.5' N., longitude 51°44' W.; depth 169 meters, dynamic height 971.111							97.....	7.12	34.30	100.....	7.15	34.30	26.87
0.....	3.88	33.42	0.....	3.88	33.42	26.57	147.....	7.81	34.48	150.....	7.80	34.49	26.92
26.....	3.87	33.42	25.....	3.85	33.42	26.57	196.....	6.72	34.66	200.....	6.70	34.66	27.21
52.....	4.31	33.48	50.....	4.20	33.47	26.58	293.....	5.63	34.64	300.....	5.50	34.64	27.35
78.....	7.38	34.18	75.....	7.00	34.10	26.73	377.....	4.33	34.66	400.....	4.25	34.67	27.52
104.....	9.55	34.65	100.....	9.50	34.64	26.77	519.....	4.09	34.78	600.....	4.10	34.83	27.66
156.....	6.93	34.42	150.....	7.20	34.45	26.98	633.....	4.16	34.85	800.....	4.25	34.92	27.72
Station 4309; Apr. 3; latitude 43°22' N., longitude 51°46' W.; depth 340 meters, dynamic height 971.093							810.....	4.25	34.925	1,000.....	4.05	34.92	27.74
0.....	6.08	33.61	0.....	6.08	33.61	26.47	1,283.....	3.66	34.90				
20.....	6.12	33.62	25.....	6.10	33.62	26.48	Station 4312; Apr. 4; latitude 42°03' N., longitude 52°26' W.; depth 2,798 meters, dynamic height 971.093						
40.....	6.13	33.62	50.....	6.15	33.63	26.47	0.....	13.35	35.49	0.....	13.35	35.49	26.72
60.....	6.23	33.71	75.....	8.00	34.21	26.68	23.....	13.36	35.49	25.....	13.35	35.49	26.72
80.....	8.43	34.37	100.....	7.15	34.66	27.15	46.....	13.36	35.48	50.....	13.30	35.48	26.72
			(150).....	5.30	34.50	27.26	69.....	11.58	35.09	75.....	11.45	35.07	26.77
			(200).....	4.95	34.47	27.29	91.....	11.11	35.03	100.....	10.70	34.97	26.83
			(300).....	4.50	34.45	27.32	137.....		34.70	150.....	7.60	34.60	27.04
Station 4310; Apr. 3-4; latitude 43°19.5' N., longitude 51°53' W.; depth 649 meters, dynamic height 971.110							183.....	5.97	34.43	200.....	5.85	34.45	27.16
0.....	6.38	33.70	0.....	6.38	33.70	26.50	274.....	5.64	34.62	300.....	5.95	34.74	27.37
18.....	6.57	33.72	25.....	6.60	33.72	26.49	335.....	6.47	34.88	400.....	5.30	34.85	27.54
35.....	6.59	33.73	50.....	7.70	34.04	26.58	512.....	4.18	34.78	600.....	4.15	34.85	27.67
53.....	8.35	34.17	75.....	9.85	34.67	26.74	695.....	4.17	34.92	800.....	4.05	34.91	27.73
71.....	9.83	34.66	100.....	9.86	34.70	26.77	878.....	4.01	34.90	1,000.....	3.85	34.90	27.74
107.....	9.70	34.70	150.....	7.55	34.64	27.07	1,349.....	3.55	34.88				
142.....	7.90	34.66	200.....	5.90	34.52	27.21							
213.....	5.59	34.50	(300).....	4.70	34.47	27.31							
			(400).....	4.10	34.61	27.49							
			(600).....	3.40	34.80	27.71							

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4313; Apr. 4; latitude 42°51' N., longitude 52°42' W.; depth 3,475 meters, dynamic height 971.146						
0.....	11.17	34.97	0.....	11.17	34.97	26.75
25.....	11.18	34.97	25.....	11.18	34.97	26.75
50.....	11.19	34.98	50.....	11.19	34.98	26.74
75.....	11.29	35.00	75.....	11.29	35.00	26.74
100.....	11.51	35.13	100.....	11.51	35.13	26.79
150.....	10.82	34.94	150.....	10.82	34.94	26.78
201.....	8.32	34.86	200.....	8.30	34.86	27.14
301.....	5.77	34.63	300.....	6.35	34.68	27.27
356.....	6.28	34.67	400.....	5.30	34.69	27.41
535.....	4.53	34.81	600.....	4.55	34.87	27.65
714.....	4.60	34.96	800.....	4.40	34.95	27.72
926.....	4.08	34.93	1,000.....	4.00	34.93	27.75
1,485.....	3.79	34.95				

Station 4314; Apr. 4; latitude 42°36' N., longitude 52°52' W.; depth 3,841 meters, dynamic height 971.139

0.....	15.56	35.94	0.....	15.56	35.94	26.58
24.....	14.79	35.76	25.....	14.70	35.75	26.63
47.....	12.52	35.19	50.....	12.50	35.18	26.65
71.....	12.35	35.16	75.....	12.30	35.14	26.66
94.....	11.22	35.01	100.....	10.85	34.99	26.81
140.....		34.92	150.....	8.00	34.88	27.20
187.....	6.76	34.73	200.....	6.60	34.71	27.27
281.....	6.15	34.65	300.....	6.05	34.65	27.29
745.....	4.67	34.94	400.....	5.60	34.72	27.40
1,286.....	3.93	34.96	600.....	4.90	34.88	27.61
			800.....	4.55	34.94	27.70
			1,000.....	4.30	34.95	27.73

Station 4315; Apr. 4; latitude 42°22.5' N., longitude 52°23' W.; depth 3,841 meters, dynamic height 971.305

0.....	16.79	36.20	0.....	16.79	36.20	26.51
25.....	16.93	36.21	25.....	16.93	36.21	26.48
49.....	16.74	36.20	50.....	16.70	36.20	26.53
74.....	16.32	36.12	75.....	16.30	36.11	26.55
98.....	15.70	35.96	100.....	15.65	35.96	26.58
148.....		35.90	150.....	14.45	35.89	26.79
196.....	13.38	35.65	200.....	13.30	35.63	26.83
294.....	10.91	35.33	300.....	10.80	35.32	27.08
249.....	11.80	35.39	400.....	9.40	35.13	27.17
451.....	8.70	35.06	600.....	6.50	34.96	27.48
752.....	4.87	34.93	800.....	4.65	34.93	27.68
1,269.....	4.04	34.96	1,000.....	4.35	34.94	27.72

Station 4316; Apr. 5; latitude 42°05' N., longitude 52°04' W.; depth 3,896 meters, dynamic height 971.281

0.....	17.41	36.35	0.....	17.41	36.35	26.47
24.....	17.40	36.34	25.....	17.40	36.34	26.47
48.....	17.41	36.34	50.....	17.40	36.34	26.47
72.....	17.39	36.33	75.....	17.35	36.33	26.47
96.....	16.08	36.09	100.....	15.90	36.07	26.60
193.....	15.24	35.93	150.....	15.40	35.97	26.65
318.....	12.20	35.53	200.....	15.15	35.91	26.66
478.....	7.77	35.04	300.....	12.70	35.60	26.94
641.....	4.40	34.79	400.....	8.55	35.27	27.42
821.....	4.64	34.95	600.....	4.75	34.82	27.58
1,305.....	4.05	34.96	800.....	4.60	34.94	27.69
			1,000.....	4.45	34.94	27.71

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4317; latitude 42°08' N., longitude 51°04' W. Apr. 5; depth 316 meters, dynamic height 971.258						
0.....	18.07	36.39	0.....	18.07	36.39	26.34
27.....	18.08	36.38	25.....	18.10	36.39	26.33
53.....	16.02	35.94	50.....	16.35	36.02	26.47
79.....	15.63	35.89	75.....	15.65	35.89	25.52
105.....	15.80	36.03	100.....	15.80	36.02	26.59
159.....	14.64	35.82	150.....	14.85	35.86	26.68
211.....	13.71	35.78	200.....	13.95	35.79	26.82
316.....	10.35	35.28	300.....	10.85	35.36	27.10
417.....	7.73	35.03	400.....	8.15	35.06	27.32
627.....	4.36	34.80	600.....	4.45	34.81	27.61
838.....	4.48	34.94	800.....	4.45	34.92	27.70
1,049.....	4.35	34.975	1,000.....	4.40	34.97	27.74
1,577.....	3.72	34.94				

Station 4318; Apr. 5; latitude 42°19' N., longitude 51°31' W.; depth 3,017 meters, dynamic height 971.258

0.....	17.16	36.26	0.....	17.16	36.26	26.46
29.....	17.10	36.26	25.....	17.10	36.26	26.47
56.....	17.07	36.25	50.....	17.10	36.26	26.47
85.....	15.83	35.98	75.....	16.25	36.08	26.53
113.....	15.39	35.95	100.....	15.60	35.91	26.56
170.....	14.16	35.66	150.....	14.60	35.72	26.63
227.....	13.10	35.60	200.....	13.60	35.63	26.77
339.....	10.06	35.25	300.....	11.40	35.40	27.03
443.....	5.86	34.68	400.....	7.40	34.92	27.32
663.....	3.96	34.80	600.....	3.95	34.76	27.62
1,328.....	3.93	34.90	800.....	4.00	34.87	27.71
			1,000.....	3.95	34.90	27.73

Station 4319; Apr. 5; latitude 42°41' N., longitude 51°00' W.; depth 1,628 meters, dynamic height 971.101

0.....	7.61	34.07	0.....	7.61	34.07	26.62
28.....	7.56	34.26	25.....	7.55	34.23	26.75
55.....	8.61	34.50	50.....	8.45	34.46	26.80
83.....	9.23	34.64	75.....	9.10	34.62	26.83
110.....	9.30	34.68	100.....	9.30	34.67	26.83
166.....	7.82	34.65	150.....	8.20	34.66	27.00
220.....	9.21	35.13	200.....	8.70	34.96	27.15
330.....	5.29	34.66	300.....	6.10	34.76	27.37
426.....	4.55	34.73	400.....	4.60	34.70	27.50
632.....	4.73	34.95	600.....	4.75	34.93	27.66
836.....	3.84	34.89	800.....	3.95	34.90	27.73
1,046.....	3.57	34.88	1,000.....	3.55	34.88	27.75
1,574.....	3.46	34.885				

Station 4320; Apr. 5; latitude 42°50.5' N., longitude 50°45' W.; depth 1,060 meters, dynamic height 971.068

0.....	5.84	33.78	0.....	5.84	33.78	26.63
25.....	7.70	34.21	25.....	7.70	34.21	26.72
50.....	8.14	34.36	50.....	8.14	34.36	26.77
75.....	8.99	34.58	75.....	8.99	34.58	26.81
100.....	9.57	34.79	100.....	9.57	34.79	26.88
150.....	6.93	34.52	150.....	6.93	34.52	27.07
200.....	6.09	34.55	200.....	6.09	34.55	27.20
300.....	4.68	34.65	300.....	4.68	34.65	27.46
397.....	3.69	34.67	400.....	3.70	34.67	27.58
594.....	4.04	34.55	600.....	4.05	34.85	27.68
791.....	3.82	34.87	800.....	3.85	34.87	27.72
987.....	3.63	34.87	1,000.....	3.60	34.87	27.75

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4321; Apr. 5-6; latitude 42°53' N., longitude 50°40' W.; depth 622 meters, dynamic height 971.056							Station 4327; Apr. 6; latitude 43°39' N., longitude 50°24' W.; depth 1,481 meters, dynamic height 971.079						
0.....	7.21	34.11	0.....	7.21	34.11	26.71	0.....	3.00	33.03	0.....	3.00	33.03	26.34
26.....	7.57	34.29	25.....	7.55	34.28	26.79	22.....	11.20	34.95	25.....	11.85	35.03	26.66
52.....	7.59	34.32	50.....	7.60	34.32	26.82	44.....	12.53	35.30	50.....	12.50	35.31	26.75
78.....	6.36	34.14	75.....	6.45	34.16	26.85	66.....	12.36	35.32	75.....	12.10	35.32	26.84
104.....	4.90	34.01	100.....	5.05	34.02	26.92	88.....	11.63	35.30	100.....	11.10	35.23	26.95
156.....	6.01	34.44	150.....	5.90	34.38	27.09	176.....	7.51	34.51	150.....	8.75	34.76	26.99
209.....	6.77	34.75	200.....	6.70	34.74	27.27	264.....	4.90	34.46	200.....	6.60	34.48	27.08
313.....	4.62	34.68	300.....	4.85	34.69	27.47	393.....	3.47	34.69	300.....	4.30	34.50	27.38
400.....	3.96	34.70	400.....	3.95	34.70	27.57	588.....	3.75	34.83	400.....	3.45	34.69	26.61
596.....	3.77	34.81	600.....	3.75	34.81	27.68	783.....	3.87	34.89	600.....	3.75	34.84	27.70
							980.....	3.64	34.87	800.....	3.85	34.89	27.73
							1,423.....	3.45	.....	1,000.....	3.60	34.87	27.75
Station 4322; Apr. 6; latitude 42°58' N., longitude 50°36' W.; depth 169 meters, dynamic height 971.068							Station 4328; Apr. 6; latitude 42°18' N., longitude 50°17' W.; depth 2,834 meters, dynamic height 971.075						
0.....	2.76	32.94	0.....	2.76	32.94	26.29	0.....	11.75	34.90	0.....	11.75	34.90	26.58
23.....	2.45	33.10	25.....	2.45	33.20	21.52	25.....	12.64	35.28	25.....	12.64	35.28	26.70
46.....	4.72	33.84	50.....	5.00	33.89	26.82	48.....	12.59	35.28	50.....	12.60	35.28	26.71
69.....	6.12	34.10	75.....	6.35	34.14	26.85	73.....	12.93	35.38	75.....	12.90	35.38	26.73
93.....	6.87	34.24	100.....	6.85	34.23	26.85	97.....	7.78	34.44	100.....	7.75	34.43	26.88
139.....	5.71	34.18	(150).....	5.40	34.16	26.98	145.....	7.34	34.36	150.....	7.30	34.37	26.90
							194.....	7.08	34.67	200.....	7.00	34.67	27.18
Station 4323; Apr. 6; latitude 43°12' N., longitude 50°23' W.; depth 89 meters, dynamic height 971.075							291.....	4.90	34.56	300.....	4.85	34.60	26.40
0.....	2.47	33.18	0.....	2.47	33.18	26.50	327.....	4.84	34.74	400.....	4.80	34.59	27.63
26.....	2.42	33.20	25.....	2.45	33.20	26.52	512.....	4.76	34.97	600.....	4.70	34.97	27.71
52.....	2.44	33.22	50.....	2.45	33.22	26.53	712.....	4.54	34.97	800.....	4.20	34.95	27.75
78.....	1.15	33.32	75.....	1.35	33.30	26.67	903.....	3.92	34.905	1,000.....	3.80	34.90	27.75
							1,402.....	3.52	34.885				
Station 4324; Apr. 6; latitude 43°20' N., longitude 50°15' W.; depth 68 meters, dynamic height 971.079							Station 4329; Apr. 7; latitude 41°55' N., longitude 50°15' W.; depth 3,475 meters, dynamic height 971.215						
0.....	2.11	32.88	0.....	2.11	32.88	26.29	0.....	16.39	36.02	0.....	16.39	36.02	26.46
25.....	1.72	32.88	25.....	1.72	32.88	26.32	27.....	16.37	36.02	25.....	16.40	36.02	26.46
51.....	1.42	32.96	50.....	1.40	32.96	26.40	53.....	16.42	36.06	50.....	16.45	36.05	26.46
							79.....	15.76	35.91	75.....	15.90	35.95	26.51
Station 4325; Apr. 6; latitude 42°59' N., longitude 50°13' W.; depth 89 meters, dynamic height 971.058							105.....	14.92	35.75	100.....	15.10	35.78	26.56
0.....	1.88	32.78	0.....	1.88	32.78	26.23	159.....			150.....	13.45	35.52	26.72
26.....	1.79	33.10	25.....	1.80	33.09	26.47	211.....	11.52	35.27	200.....	11.85	35.31	26.88
51.....	1.50	33.30	50.....	1.50	33.30	26.66	316.....	9.16	35.13	300.....	9.45	35.15	27.18
77.....	1.46	33.30	75.....	1.45	33.30	26.67	380.....	7.88	35.07	400.....	7.50	35.05	27.40
							575.....	4.35	34.80	600.....	4.30	34.81	27.63
							775.....	4.14	34.88	(800).....	4.10	34.89	27.71
										(1,000).....	3.90	34.90	27.74
Station 4326; Apr. 6; latitude 42°48.5' N., longitude 50°20' W.; depth 403 meters, dynamic height 971.034							Station 4330; Apr. 7; latitude 41°35' N., longitude 50°11' W.; depth 3,841 meters, dynamic height 971.323						
0.....	7.29	34.03	0.....	7.29	34.03	26.63	0.....	17.95	36.40	0.....	17.95	36.40	26.38
25.....	7.11	34.10	25.....	7.11	34.10	26.72	22.....	17.97	36.41	25.....	17.95	36.41	26.38
50.....	6.98	34.25	50.....	6.98	34.25	26.85	43.....	17.96	36.41	50.....	17.95	36.42	26.39
75.....	5.35	34.04	75.....	5.35	34.04	26.89	65.....	17.86	36.45	75.....	17.95	36.45	26.42
100.....	5.13	34.01	100.....	5.13	34.01	26.90	87.....	17.85	36.45	100.....	17.95	36.45	26.42
150.....	6.48	34.45	150.....	6.48	34.45	27.07	131.....	17.92	36.43	150.....	17.90	36.45	26.43
200.....	4.63	34.49	200.....	4.63	34.49	27.33	174.....	17.83	36.44	200.....	17.10	36.27	26.48
300.....	3.60	34.65	300.....	3.60	34.65	27.57	261.....	15.12	35.86	300.....	14.15	35.83	26.81
			(400).....				331.....	13.57	35.81	(400).....	10.00	35.37	27.26
										(600).....	4.15	34.81	27.64
										(800).....	4.10	34.94	27.75
										(1,000).....	3.90	34.93	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	σ_t	Depth, meters	Tem- pera- ture °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	σ_t
Station 4331; Apr. 7; latitude 42°05' N., longitude 49°24' W.; depth 2,926 meters, dynamic height 971.118								Station 4335; Apr. 8; latitude 42°41.5' N., longitude 49°07' W.; depth 2,543 meters, dynamic height 970.981							
0.....	17.62	36.27		0.....	17.62	36.27	26.36	0.....	6.83	33.64		0.....	6.83	33.64	26.40
23.....	17.60	36.26	25.....	17.60	36.26	26.35		28.....	5.70	33.73	25.....	5.80	33.72	26.59	
45.....	17.53	36.245	50.....	17.50	36.24	26.36		55.....	5.52	33.72	50.....	5.55	33.72	26.62	
68.....	15.75	35.92	75.....	15.35	35.86	26.57		82.....	3.07	34.00	75.....	3.60	33.91	26.98	
91.....	14.77	35.75	100.....	14.80	35.77	26.63		109.....	2.63	34.16	100.....	2.70	34.11	27.22	
137.....	15.17	35.89	150.....	15.00	35.84	26.63		220.....	4.46	34.70	150.....	3.10	34.36	27.39	
1.....	13.91	35.63	200.....	11.70	35.40	26.98		329.....	5.00	34.89	200.....	4.20	34.60	27.47	
273.....	5.47	34.63	300.....	4.65	34.43	27.28		308.....	4.70	34.92	300.....	4.80	34.88	27.62	
212.....	6.97	34.64	400.....	4.10	34.88	27.70		502.....	4.55	34.96	400.....	4.75	34.94	27.67	
301.....		34.43	600.....	4.25	34.97	27.76		723.....	4.02	34.93	600.....	4.30	34.95	27.73	
379.....	4.13	34.85	800.....	3.90	34.94	27.77		920.....	3.84	34.92	800.....	3.90	34.92	27.76	
520.....	4.35	34.98	1,000.....	3.60	34.92	27.79		1,442.....	3.57	34.91	1,000.....	3.80	34.92	27.77	
954.....	3.62	34.92													
Station 4332; Apr. 7; latitude 41°33' N., longitude 49°04' W.; depth 3,255 meters, dynamic height 971.034								Station 4336; Apr. 8; latitude 43°20.5' N., longitude 48°50' W.; depth 1,566 meters, dynamic height 970.972							
0.....	5.66	33.44	0.....	5.66	33.44	26.38		0.....	7.21	33.58	0.....	7.21	33.58	26.29	
28.....	5.39	33.73	25.....	5.45	33.70	26.62		25.....	5.80	33.56	25.....	5.80	33.56	26.46	
55.....	5.12	33.78	50.....	5.15	33.77	26.71		50.....	4.63	33.60	50.....	4.63	33.60	26.63	
83.....	4.91	33.89	75.....	5.00	33.85	26.79		75.....	3.43	33.70	75.....	3.43	33.70	26.83	
110.....	3.46	33.84	100.....	3.95	33.86	26.90		100.....	2.80	34.04	100.....	2.81	34.04	27.16	
166.....	2.98	34.14	150.....	3.10	34.08	27.16		150.....	3.54	34.43	150.....	3.54	34.43	27.39	
222.....	2.57	34.27	200.....	2.65	34.22	27.32		201.....	3.96	34.72	200.....	3.95	34.71	27.58	
332.....	3.54	34.64	300.....	3.15	34.52	27.51		301.....	4.22	34.86	300.....	4.20	34.86	27.68	
426.....	4.56	34.85	400.....	4.35	34.81	27.62		389.....	4.11	34.88	400.....	4.10	34.88	27.70	
638.....	4.18	34.94	600.....	4.25	34.93	27.62		581.....	3.99	34.90	600.....	3.95	34.90	27.73	
851.....	4.10	34.95	800.....	4.10	34.95	27.76		772.....	3.69	34.89	800.....	3.65	34.89	27.75	
			(1,000)	4.00	34.95	27.77		967.....	3.68	34.90	1,000.....	3.65	34.90	27.76	
								1,459.....	3.59	34.915					
Station 4333; Apr. 8; latitude 42°00' N., longitude 47°56' W.; depth 3,841 meters, dynamic height 971.217								Station 4337; Apr. 9; latitude 43°05.5' N., longitude 48°11' W.; depth 3,109 meters, dynamic height 970.986							
0.....	15.87	35.87	0.....	15.87	35.87	26.46		0.....	10.11	34.29	0.....	10.11	34.29	26.40	
23.....	15.87	35.88	25.....	15.80	35.88	26.48		21.....	6.19	33.78	25.....	5.70	33.75	26.62	
46.....	11.93	34.995	50.....	11.90	35.00	26.63		42.....	4.71	33.70	50.....	4.40	33.78	26.80	
68.....	11.86	35.01	75.....	12.20	35.08	26.63		63.....	3.97	34.04	75.....	3.60	34.09	27.12	
91.....	13.43	35.50	100.....	13.30	35.48	26.72		85.....	3.43	34.14	100.....	3.40	34.19	27.22	
136.....	12.74	35.36	150.....	12.55	35.40	26.81		170.....	3.56	34.48	150.....	3.45	34.40	27.38	
182.....	12.27	35.52	200.....	11.65	35.40	26.98		255.....	4.51	34.78	200.....	3.95	34.59	27.48	
273.....	6.21	34.44	300.....	5.50	34.32	27.10		334.....	4.32	34.85	300.....	4.45	34.83	27.62	
298.....	5.49	34.32	400.....	6.25	34.64	27.25					(400).....	4.30	34.87	27.67	
486.....	6.71	34.92	600.....	5.15	34.92	27.62					(600).....	4.20	34.90	27.71	
709.....	4.10	34.92	800.....	4.15	34.94	27.74					(800).....	4.05	34.90	27.72	
863.....	4.25	34.955	1,000.....	4.15	34.95	27.75					(1,000).....	3.90	34.90	27.74	
1,285.....	3.89	34.92													
Station 4334; Apr. 8; latitude 42°28' N., longitude 48°32' W.; depth 3,292 meters, dynamic height 971.056								Station 4338; Apr. 9; latitude 42°51' N., longitude 47°32' W.; depth 3,676 meters, dynamic height 971.016							
0.....	7.71	33.71	0.....	7.71	33.71	26.33		0.....	8.43	33.57	0.....	8.43	33.57	26.12	
26.....	8.33	34.13	25.....	8.30	34.11	26.55		16.....	7.71	34.32	25.....	7.25	34.36	26.90	
51.....	5.21	33.98	50.....	5.25	33.99	26.86		33.....	7.05	34.41	50.....	7.25	34.49	27.00	
76.....	3.76	33.86	75.....	3.75	33.86	26.92		49.....	7.28	34.49	75.....	6.40	34.40	27.05	
101.....	4.90	34.21	100.....	4.90	34.20	27.07		65.....	6.16	34.34	100.....	7.05	34.65	27.16	
153.....	7.36	34.83	150.....	7.35	34.82	27.25		99.....	7.03	34.65	150.....	4.90	34.42	27.25	
204.....	4.70	34.45	200.....	4.85	34.45	27.28		131.....	4.21	34.29	200.....	6.65	34.82	27.35	
305.....	3.55	34.48	300.....	3.55	34.48	27.43		197.....	6.69	34.82	300.....	4.80	34.76	27.53	
397.....	3.23	34.56	400.....	3.25	34.56	27.53		363.....	4.16	34.72	400.....	4.15	34.75	27.59	
589.....	4.73	34.94	600.....	4.70	34.94	27.68		547.....	4.40	34.91	600.....	4.35	34.91	27.70	
778.....	4.17	34.935	800.....	4.10	34.93	27.74		732.....	4.08	34.91	800.....	3.95	34.91	27.74	
			(1,000).....	3.95	34.92	27.75		923.....	3.81	34.90	1,000.....	3.75	34.90	27.75	
								1,413.....	3.58	34.91					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4339; Apr. 9; latitude 42°42.5' N., longitude 46°49' W.; depth 4,024 meters, dynamic height 971.028							Station 4343; Apr. 10; latitude 43°59' N., longitude 47°08' W.; depth 4,097 meters, dynamic height 971.272						
0.....	14.31	34.96	0.....	14.31	34.96	26.11	0.....	16.52	36.08	0.....	16.52	36.08	26.47
27.....	14.16	35.15	25.....	14.15	35.14	26.28	22.....	16.53	36.10	25.....	16.55	36.10	26.48
53.....	8.53	34.46	50.....	9.40	34.58	26.74	44.....	16.30	36.10	50.....	16.25	36.10	26.56
80.....	6.23	34.30	75.....	6.30	34.31	26.99	66.....	16.27	36.11	75.....	16.25	36.11	26.56
106.....	7.49	34.67	100.....	7.25	34.58	27.07	88.....	16.21	36.09	100.....	16.00	36.02	26.55
159.....	6.97	34.82	150.....	7.15	34.81	27.27	133.....	14.90	35.80	150.....	14.60	35.79	26.68
212.....	5.18	34.64	200.....	5.45	34.67	27.38	177.....	14.29	35.78	200.....	13.65	35.68	26.80
318.....	.....	34.86	300.....	5.15	34.82	27.54	265.....	11.04	35.26	300.....	10.60	35.25	27.06
412.....	5.12	34.93	400.....	5.10	34.92	27.62	269.....	11.37	35.35	400.....	9.00	35.13	27.24
519.....	4.93	34.94	600.....	4.50	34.97	27.73	403.....	8.97	35.12	600.....	5.10	34.89	27.59
562.....	4.66	34.97	800.....	4.15	34.95	27.75	538.....	5.76	34.90	800.....	4.15	34.89	27.70
715.....	4.24	34.96	1,000.....	3.95	34.94	27.76	700.....	4.53	34.89	1,000.....	3.85	34.89	27.73
1,122.....	3.87	34.93					1,151.....	3.74	34.89				
Station 4340; Apr. 9; latitude 43°07.5' N., longitude 46°21' W.; depth 4,390 meters, dynamic height 971.158							Station 4344; Apr. 10; latitude 44°08.5' N., longitude 47°56' W.; depth 3,658 meters, dynamic height 971.105						
0.....	16.75	35.94	0.....	16.75	35.94	26.32	0.....	13.75	35.13	0.....	13.75	35.13	26.36
24.....	16.22	35.88	25.....	16.20	35.88	26.39	19.....	14.57	35.61	25.....	14.60	35.65	26.58
48.....	14.96	35.72	50.....	14.90	35.72	26.57	37.....	14.62	35.68	50.....	13.40	35.45	26.68
71.....	14.61	35.78	75.....	14.40	35.77	26.72	56.....	12.67	35.33	75.....	12.00	35.25	26.80
95.....	13.36	35.51	100.....	13.50	35.54	26.73	150.....	10.85	35.14	100.....	11.35	35.09	26.80
142.....	14.54	35.72	150.....	12.40	35.42	26.86	224.....	7.72	34.88	150.....	10.85	35.14	26.93
190.....	9.62	35.05	200.....	9.20	35.00	27.10	345.....	5.93	34.89	200.....	8.65	34.95	27.15
285.....	6.03	34.62	300.....	5.80	34.59	27.27	478.....	.....	34.90	300.....	6.30	34.88	27.44
237.....	7.83	34.83	400.....	5.15	34.52	27.30	579.....	5.03	34.97	400.....	5.70	34.89	27.52
447.....	4.90	34.51	600.....	3.90	34.88	27.72	775.....	4.07	34.91	600.....	4.90	34.97	27.69
596.....	3.88	34.87	(800).....	4.05	34.94	27.75	1,357.....	3.59	34.89	800.....	4.00	34.91	27.74
			(1,000).....	3.90	34.93	27.76				1,000.....	3.85	34.90	27.74
Station 4341; Apr. 9; latitude 43°27' N., longitude 45°57' W.; depth 4,390 meters, dynamic height 971.141							Station 4345; Apr. 10; latitude 44°12.5' N., longitude 48°33' W.; depth 2,177 meters, dynamic height 971.002						
0.....	15.41	35.34	0.....	15.41	35.34	26.16	0.....	7.72	33.73	0.....	7.72	33.73	26.34
24.....	15.18	35.66	25.....	15.15	35.66	26.47	22.....	7.43	33.75	25.....	7.40	33.76	26.41
48.....	13.09	35.32	50.....	12.70	35.23	26.65	45.....	7.08	33.91	50.....	6.70	33.89	26.60
73.....	9.15	34.57	75.....	8.75	34.53	26.81	67.....	2.89	33.60	75.....	4.25	33.63	26.69
97.....	7.69	34.36	100.....	7.70	34.36	26.84	180.....	1.60	34.24	100.....	2.20	33.76	26.98
146.....	8.18	34.49	150.....	8.30	34.53	27.87	270.....	2.99	34.61	150.....	1.70	34.06	27.26
194.....	9.55	35.06	200.....	9.50	35.06	27.10	319.....	4.00	34.80	200.....	1.80	34.33	27.47
291.....	7.93	34.96	300.....	7.65	34.94	27.30	504.....	4.17	34.90	300.....	3.80	34.74	27.62
347.....	6.42	34.81	400.....	5.85	34.86	27.48	708.....	3.82	34.89	400.....	4.10	34.87	27.70
501.....	5.21	34.91	600.....	4.80	34.92	27.66	896.....	3.76	34.905	600.....	4.00	34.90	27.73
678.....	4.53	34.92	800.....	4.15	34.92	27.73	1,381.....	3.47	34.885	800.....	3.75	34.90	27.75
859.....	4.03	34.92	1,000.....	3.85	34.91	27.75				1,000.....	3.65	34.90	27.76
1,335.....	3.66	34.90											
Station 4342; Apr. 10; latitude 43°4.5' N., longitude 46°28' W.; depth 4,170 meters, dynamic height 971.203							Station 4346; Apr. 10; latitude 44°15' N., longitude 48°45' W.; depth 1,609 meters, dynamic height 971.010						
0.....	15.93	35.80	0.....	15.93	35.80	26.40	0.....	0.99	32.90	0.....	0.99	32.90	26.38
23.....	15.36	35.79	25.....	15.30	35.79	26.53	24.....	6.11	33.74	25.....	6.10	33.74	26.57
45.....	14.98	35.74	50.....	15.05	35.75	26.55	48.....	4.56	33.77	50.....	4.20	33.76	26.80
68.....	15.35	35.855	75.....	15.35	35.87	26.58	73.....	1.47	33.49	75.....	1.35	33.49	26.83
91.....	15.18	35.855	100.....	14.85	35.80	26.64	97.....	0.86	33.52	100.....	0.85	33.54	26.90
136.....	12.52	35.45	150.....	12.05	35.36	26.88	146.....	1.97	34.04	150.....	1.95	34.06	27.25
273.....	7.70	34.75	200.....	10.25	35.10	27.00	195.....	1.45	34.22	200.....	1.50	34.24	27.42
291.....	7.06	34.68	300.....	7.00	34.68	27.18	292.....	3.25	34.56	300.....	3.20	34.58	27.55
445.....	6.64	34.935	400.....	6.75	34.88	27.38	384.....	3.59	34.73	400.....	3.60	34.75	27.65
607.....	5.49	34.95	600.....	5.55	34.95	27.59	545.....	4.13	34.89	600.....	4.05	34.89	27.71
777.....	4.83	34.995	800.....	4.70	34.99	27.72	714.....	3.75	34.88	800.....	3.55	34.88	27.75
1,234.....	3.71	34.90	1,000.....	4.00	34.95	27.77	900.....	3.44	34.87	1,000.....	3.40	34.87	27.77
							1,371.....	3.40	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4347; Apr. 10; latitude 44°14' N., longitude 48°54' W.; depth 558 meters, dynamic height 971.050

0	1.93	32.87	0	1.93	32.87	26.29
25	-0.13	33.12	25	-0.13	33.12	26.61
50	-0.33	33.16	50	-0.33	33.16	26.65
75	-0.66	33.18	75	-0.66	33.18	26.69
100	-0.37	33.24	100	-0.37	33.24	26.72
150	-0.25	33.49	150	-0.25	33.49	26.92
201	0.86	34.02	200	0.90	34.01	27.28
301	2.13	34.44	300	2.10	34.44	27.53
400	3.77	34.76	400	3.75	34.76	27.64
497	3.98	34.84				

Station 4348; Apr. 10; latitude 44°14' N., longitude 49°00' W.; depth 169 meters, dynamic height 971.066

0	2.25	32.78	0	2.25	32.78	26.20
25	1.46	33.18	25	1.46	33.18	26.58
50	0.73	33.20	50	0.73	33.20	26.47
75	0.87	33.24	75	0.87	33.24	26.67
101	-0.10	33.20	100	-0.10	33.20	26.68
151	-0.21	33.41	150	-0.20	33.41	26.86

Station 4349; Apr. 10; latitude 44°16' N., longitude 49°10' W.; depth 78 meters, dynamic height 971.068

0	2.43	32.72	0	2.43	32.72	26.13
25	1.04	33.12	25	1.04	33.12	26.56
51	0.06	33.16	50	0.05	33.16	26.64
71	0.03	33.16	75	0.00	33.16	26.64

Station 4350; Apr. 10; latitude 44°15' N., longitude 49°23' W.; depth 53 meters, dynamic height 971.073

0	1.20	32.70	0	1.20	32.70	26.21
26	0.17	32.94	25	0.15	32.94	26.46
41	0.25	32.96	50	0.30	32.97	26.48

Station 4351; Apr. 11; latitude 44°59.5' N., longitude 49°24' W.; depth 73 meters; dynamic height 971.112

0	1.27	32.68	0	1.27	32.68	26.19
25	0.44	32.85	25	0.44	32.85	26.38
51	-0.34	32.89	50	-0.35	32.89	26.43

Station 4352; Apr. 11; latitude 44°57.5' N., longitude 49°15' W.; depth 123 meters, dynamic height 971.121

0	1.25	32.62	0	1.25	32.62	26.14
25	0.65	32.66	25	0.65	32.66	26.21
51	-0.19	32.71	50	-0.20	32.71	26.29
76	-0.49	32.84	75	-0.50	32.84	26.41
102	-0.70	33.01	100	-0.70	33.00	26.55

Station 4353; Apr. 11; latitude 44°54.5' N., longitude 49°04' W.; depth 631 meters, dynamic height 971.061

0	1.73	32.58	0	1.73	32.58	26.08
20	2.88	33.12	25	2.50	33.10	26.43
40	-1.11	33.01	50	-1.00	33.10	26.63
61	-0.83	33.21	75	-0.80	33.23	26.73
81	-0.79	33.24	100	-0.65	33.29	26.77
121	-0.46	33.37	150	-0.15	33.51	26.94
161	0.02	33.57	200	0.60	33.87	27.18
242	1.43	34.22	300	3.15	34.61	27.58
308	3.25	34.65	400	3.65	34.79	27.67
417	3.71	34.80	(600)	3.90	34.85	27.70

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4354; Apr. 11; latitude 44°47' N., longitude 48°50' W.; depth 1,463 meters, dynamic height 970.967

0	9.26	34.01	0	9.26	34.01	26.32
24	9.16	34.03	25	9.15	34.03	26.35
48	8.24	34.43	50	7.95	34.43	26.85
72	4.85	34.18	75	4.70	34.18	27.08
96	3.95	34.23	100	3.95	34.25	27.22
145	4.24	34.52	150	4.25	34.54	27.41
194	4.15	34.70	200	4.20	34.72	27.57
290	4.52	34.86	300	4.50	34.86	27.64
232	4.79	34.83	400	4.40	34.88	27.66
373	4.47	34.88	600	3.90	34.90	27.74
714	3.78	34.90	800	3.70	34.90	27.76
1,210	3.41	34.87	1,000	3.55	34.89	27.76

Station 4355; Apr. 11; latitude 44°41' N., longitude 48°30' W.; depth 2,195 meters, dynamic height 970.966

0	7.51	33.63	0	7.51	33.63	26.29
19	7.11	33.80	25	6.95	33.80	26.51
39	6.39	33.80	50	5.45	33.81	26.71
58	4.54	33.83	75	3.90	34.00	27.02
77	3.86	34.01	100	3.85	34.24	27.22
116	3.86	34.38	150	4.05	34.55	27.44
155	4.08	34.58	200	4.35	34.73	27.55
232	4.61	34.84	300	4.50	34.88	27.65
263	4.42	34.84	400	4.40	34.91	27.69
419	4.36	34.92	600	4.10	34.93	27.74
593	4.15	34.93	800	3.85	34.91	27.75
768	3.90	34.915	1,000	3.70	34.91	27.77
1,251	3.57	34.905				

Station 4356; Apr. 11; latitude 44°34' N., longitude 47°45' W.; depth 3,566 meters, dynamic height 971.170

0	15.04	35.70	0	15.04	35.70	26.52
18	15.06	35.72	25	15.10	35.72	26.52
36	15.10	35.72	50	15.30	35.86	26.58
53	15.36	35.90	75	14.90	35.75	26.59
71	15.03	35.78	100	13.70	35.57	26.71
107	13.21	35.50	150	10.90	35.16	26.94
143	11.03	35.16	200	10.25	35.21	27.09
214	10.05	35.22	300	8.05	35.07	27.34
383	6.36	34.94	400	6.30	34.94	27.48
567	6.25	34.99	600	6.00	34.98	27.55
747	4.41	34.93	800	4.25	34.93	27.72
949	4.05	34.93	1,000	4.00	34.93	27.75
1,478	3.57	34.90				

Station 4357; Apr. 11; latitude 44°30.5' N., longitude 47°08' W.; depth 3,786 meters dynamic height 971.302

0	16.37	36.11	0	16.37	36.11	26.53
21	16.40	36.11	25	16.40	36.11	26.52
43	16.41	36.11	50	16.35	36.10	26.54
64	16.10	36.08	75	16.15	36.07	26.54
86	16.10	36.07	100	16.10	36.05	26.55
129	15.86	36.00	150	15.65	35.92	26.56
172	15.37	35.98	200	14.45	35.71	26.66
258	12.29	35.44	300	11.35	35.36	27.01
360	10.25	35.26	400	9.35	35.19	27.22
544	6.22	34.93	600	5.65	34.94	27.57
732	4.95	34.955	800	4.55	34.94	27.70
924	4.09	34.90	1,000	3.95	34.91	27.74
1,414	3.69	34.91				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4358; Apr. 12; latitude 44°26' N., longitude 46°39' W.; depth 3,841 meters, dynamic height 971.322							Station 4362; Apr. 12; latitude 45°20' N., longitude 45°15' W.; depth 3,658 meters, dynamic height 970.988						
0	16.33	36.14	0	16.33	36.14	26.56	0	11.45	34.52	0	11.45	34.52	26.34
20	16.45	36.14	25	16.45	36.14	26.54	24	10.89	34.78	25	10.85	34.78	26.65
41	16.42	36.125	50	16.45	36.13	26.53	49	9.44	34.56	50	9.30	34.55	26.74
61	16.46	36.14	75	16.40	36.13	26.54	73	6.86	34.20	75	6.80	34.20	26.84
82	16.40	36.12	100	16.40	36.12	26.53	97	5.73	34.32	100	5.55	34.33	27.10
124	16.45	36.14	150	16.50	36.15	26.53	146	4.29	34.45	150	4.30	34.46	27.35
165	16.53	36.16	200	15.10	35.96	26.71	195	4.41	34.58	200	4.40	34.59	27.44
247	13.36	35.67	300	11.95	35.46	26.98	292	4.43	34.78	300	4.40	34.79	27.59
261	12.81	35.58	400	9.45	35.19	27.21	356	4.23	34.84	400	4.10	34.86	27.69
391	9.66	35.21	600	6.00	34.96	27.54	536	3.87	34.88	600	3.80	34.88	27.73
522	6.77	34.96	800	4.95	34.95	27.66	719	3.68	34.88	800	3.55	34.88	27.75
694	5.44	34.96	1,000	4.20	34.92	27.73	904	3.51	34.87	1,000	3.45	34.87	27.76
1,198	3.80	34.90					1,374	3.35	34.87				
Station 4359; Apr. 12; latitude 44°12' N., longitude 45°48' W.; depth 4,115 meters, dynamic height 971.210							Station 4363; Apr. 13; latitude 45°20' N., longitude 45°59' W.; depth 3,566 meters, dynamic height 971.053						
0	14.68	35.41	0	14.68	35.41	26.38	0	14.50	35.51	0	14.50	35.31	26.49
24	14.63	35.42	25	14.65	35.42	26.39	25	14.88	35.52	25	14.48	35.52	26.50
49	13.56	35.50	50	13.50	35.49	26.69	50	14.20	35.59	50	14.20	35.59	26.62
73	12.70	35.335	75	12.60	35.32	26.74	75	12.62	35.34	75	12.62	35.34	26.75
147	10.68	35.09	100	11.95	35.23	26.80	100	9.12	34.72	100	9.12	34.72	26.90
293	7.73	34.88	150	10.60	35.08	26.92	397	4.77	34.90	150	5.90	34.60	27.27
312	6.44	34.71	200	9.45	34.96	27.03	595	4.76	34.92	200	4.70	34.55	27.37
465	5.62	34.91	300	7.30	34.80	27.24	796	4.31	34.93	300	4.65	34.72	27.52
766	5.47	34.915	400	5.80	34.87	27.50	996	4.01	34.925	400	4.75	34.90	27.64
1,134	3.86	34.905	600	5.50	34.91	27.57	1,499	3.48	34.91	600	4.75	34.92	27.66
			800	5.35	34.91	27.58				800	4.25	34.93	27.72
			1,000	4.30	34.91	27.70				1,000	4.00	34.92	27.75
Station 4360; Apr. 12; latitude 44°09' N., longitude 45°14' W.; depth 4,481 meters, dynamic height 971.067							Station 4364; Apr. 13; latitude 45°21' N., longitude 46°45' W.; depth 3,017 meters, dynamic height 970.957						
0	13.70	35.12	0	13.70	35.12	26.36	0	7.84	33.61	0	7.84	33.61	26.23
21	13.78	35.13	25	13.80	35.11	26.34	25	11.00	34.74	25	11.00	34.74	26.59
42	12.68	34.98	50	12.00	34.94	26.56	50	3.82	33.60	50	3.82	33.60	26.72
63	11.02	34.91	75	10.75	34.91	26.77	75	3.26	33.98	75	3.26	33.98	27.03
84	10.56	34.91	100	9.75	34.83	26.98	100	2.71	34.18	100	2.71	34.18	27.27
127	8.08	34.69	150	7.80	34.71	27.10	151	2.83	34.43	150	2.85	34.43	27.46
170	7.61	34.73	200	7.25	34.75	27.21	201	4.13	34.69	200	4.10	34.69	27.55
254	6.33	34.78	300	4.80	34.67	27.45	301	3.75	34.78	300	3.75	34.78	27.65
277	4.67	34.59	400	4.65	34.87	27.64	393	4.60	34.94	400	4.60	34.94	27.69
367	5.40	34.94	600	4.05	34.90	27.72	589	4.10	34.93	600	4.05	34.93	27.74
426	4.13	34.82	800	3.85	34.89	27.73	788	4.00	34.92	800	3.83	34.92	27.76
528	4.14	34.90	(1,000)	3.80	34.89	27.74	987	3.73	34.92	1,000	3.70	34.92	27.78
773	3.91	34.89					1,488	3.51	34.915				
Station 4361; Apr. 12; latitude 44°46.5' N., longitude 45°15' W.; depth 4,042 meters, dynamic height 971.004							Station 4365; Apr. 13; latitude 45°20.5' N., longitude 47°23' W.; depth 2,652 meters, dynamic height 970.959						
0	11.71	34.43	0	11.71	34.43	26.23	0	9.23	34.00	0	9.23	34.00	26.32
24	11.43	34.50	25	11.40	34.51	26.34	25	10.17	34.41	25	10.17	34.41	26.48
48	10.26	34.74	50	10.20	34.74	26.73	50	9.39	34.43	50	9.39	34.43	26.62
71	8.91	34.68	75	8.50	34.63	26.92	75	3.70	34.01	75	3.70	34.01	27.05
95	5.90	34.37	100	5.70	34.38	27.12	100	2.12	34.09	100	2.12	34.09	27.25
143	5.02	34.55	150	5.05	34.57	27.35	150	3.59	34.47	150	3.59	34.47	27.43
191	5.31	34.72	200	5.30	34.74	27.45	200	4.50	34.76	200	4.50	34.76	27.56
286	4.94	34.86	300	4.85	34.88	27.61	300	4.52	34.90	300	4.52	34.90	27.67
392	4.59	34.92	400	4.55	34.92	27.69	380	4.29	34.90	400	4.25	34.90	27.70
589	4.42	34.90	600	4.35	34.90	27.69	571	4.12	34.93	600	4.05	34.93	27.75
789	3.97	34.91	800	3.90	34.91	27.75	764	3.77	34.91	800	3.70	34.90	27.76
990	3.67	34.90	1,000	3.65	34.90	27.76	958	3.53	34.88	1,000	3.50	34.88	27.76
1,498	3.46	34.90					1,447	3.42	34.90				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4366; Apr. 13; latitude 45°33' N., longitude 47°50' W.; depth 1,353 meters, dynamic height 970.988						
0.....	3.17	32.72	0.....	3.17	32.72	26.08
24.....	0.78	33.26	25.....	0.75	33.27	26.69
47.....	-0.51	33.34	50.....	-0.50	33.35	26.82
71.....	-0.11	33.51	75.....	0.10	33.55	26.95
95.....	1.25	33.87	100.....	1.40	33.93	27.17
142.....	3.29	34.26	150.....	2.60	34.31	27.39
189.....	4.18	34.54	200.....	4.30	34.58	27.44
284.....	4.53	34.82	300.....	4.70	34.87	27.63
313.....	4.90	34.90	400.....	4.60	34.93	27.68
460.....	4.51	34.94	600.....	4.50	34.91	27.70
606.....		34.91	800.....	3.70	34.86	27.73
747.....		34.86	(1,000).....	3.35	34.87	27.77
948.....	3.40	31.865				

Station 4367; Apr. 13; latitude 45°39' N., longitude 48°00' W.; depth 622 meters, dynamic height 971.077

0.....	2.52	32.41	0.....	2.52	32.41	25.89
25.....	0.06	32.62	25.....	0.06	32.62	26.21
51.....	-1.14	32.89	50.....	-1.15	32.88	26.46
76.....	-1.17	33.02	75.....	-1.15	33.02	26.58
101.....	-0.87	33.14	100.....	-0.90	33.13	26.66
152.....	0.10	33.63	150.....	0.05	33.62	27.02
203.....	0.75	33.66	200.....	0.70	33.94	27.23
304.....	2.36	34.34	300.....	2.60	34.44	27.49
319.....	3.75	34.65	400.....	3.60	34.72	27.63
456.....	3.71	34.78				

Station 4368; Apr. 13; latitude 45°43' N., longitude 48°05' W.; depth 165 meters, dynamic height 971.086

0.....	2.48	32.38	0.....	2.48	32.38	25.86
22.....	0.32	32.55	25.....	0.10	32.56	26.15
45.....	-1.24	32.80	50.....	-1.25	32.84	26.43
67.....	-1.19	32.98	75.....	-1.05	33.05	26.60
89.....	-0.79	33.21	100.....	-0.65	33.26	26.75
134.....	-0.33	33.38	(150).....	-0.20	33.42	26.87

Station 4369; Apr. 13; latitude 45°46' N., longitude 48°14' W.; depth 112 meters, dynamic height 971.096

0.....	2.06	32.46	0.....	2.06	32.46	25.96
26.....	1.94	32.48	25.....	2.00	32.48	25.97
53.....	-0.52	32.71	50.....	-0.30	32.67	26.26
79.....	-1.28	32.96	75.....	-1.30	32.92	26.50
100.....	-0.97	33.17	100.....	-0.95	33.18	26.70

Station 4370; Apr. 13; latitude 45°53.5' N., longitude 48°25' W.; depth 89 meters, dynamic height 971.088

0.....	1.89	32.55	0.....	1.89	32.55	26.04
25.....	0.48	32.64	25.....	0.48	32.64	26.21
50.....	0.09	32.70	50.....	0.09	32.70	26.27
75.....	-0.88	33.02	75.....	-0.88	33.02	26.57

Station 4371; Apr. 14; latitude 46°02.5' N., longitude 48°38' W.; depth 73 meters, dynamic height 971.087

0.....	1.78	32.60	0.....	1.78	32.60	26.09
23.....	0.36	32.70	25.....	0.30	32.70	26.26
45.....	-0.02	32.71	50.....	-0.15	32.73	26.31

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4372; Apr. 14; latitude 46°17.5' N., longitude 49°03' W.; depth 68 meters, dynamic height 971.086						
0.....	2.24	32.57	0.....	2.24	32.57	26.03
23.....	2.11	32.58	25.....	2.05	32.59	26.07
46.....	0.54	32.72	50.....	0.35	32.75	26.30

Station 4373; Apr. 14; latitude 46°14' N., longitude 48°39' W.; depth 89 meters, dynamic height 971.078

0.....	2.26	32.52	0.....	2.26	32.52	25.99
26.....	0.72	32.66	25.....	0.80	32.66	26.20
51.....	0.31	32.71	50.....	0.35	32.70	26.25
77.....	-0.40	32.94	75.....	-0.35	32.91	26.45

Station 4374; Apr. 14; latitude 46°11' N., longitude 48°01' W.; depth 115 meters, dynamic height 971.080

0.....	1.92	32.47	0.....	1.92	32.47	25.98
25.....	0.45	32.53	25.....	0.45	32.53	26.12
50.....	-0.39	32.68	50.....	-0.39	32.68	26.27
75.....	-1.11	32.88	75.....	-1.11	32.88	26.46
100.....	-0.95	33.11	100.....	-0.95	33.11	26.64

Station 4375; Apr. 14; latitude 46°10.5' N., longitude 47°44' W.; depth 169 meters, dynamic height 971.058

0.....	2.53	32.49	0.....	2.53	32.49	25.94
24.....	0.02	32.60	25.....	0.00	32.61	26.21
48.....	-1.17	32.96	50.....	-1.20	32.97	26.54
71.....	-0.93	33.19	75.....	-0.85	33.22	26.72
95.....	-0.40	33.40	100.....	-0.35	33.43	26.87
143.....	0.03	33.58	150.....	0.10	33.59	26.98

Station 4376; Apr. 14; latitude 46°09.5' N., longitude 47°26' W.; depth 626 meters, dynamic height 970.980

0.....	6.03	33.28	0.....	6.03	33.28	26.21
25.....	-0.66	32.94	25.....	-0.66	32.94	26.50
50.....	-0.75	33.22	50.....	-0.75	33.22	26.72
74.....	0.05	33.73	75.....	0.05	33.74	27.11
99.....	0.46	33.80	100.....	0.45	33.80	27.13
149.....	1.41	34.15	150.....	1.40	34.16	27.37
198.....	1.63	34.32	200.....	1.65	34.32	27.48
297.....	2.61	34.56	300.....	2.65	34.57	27.60
388.....	3.67	34.78	400.....	3.65	34.79	27.67
586.....	3.81	34.86	600.....	3.80	34.86	27.72

Station 4377; Apr. 14; latitude 46°0.' N., longitude 47°10' W.; depth 1,225 meters, dynamic height 970.961

0.....	5.44	33.07	0.....	5.44	33.07	26.12
25.....	2.11	33.24	25.....	2.11	33.24	26.58
49.....	1.38	33.53	50.....	1.35	33.53	26.86
74.....	1.13	33.86	75.....	1.15	33.86	27.14
99.....	1.32	34.02	100.....	1.30	34.02	27.26
148.....	1.39	34.23	150.....	1.40	34.23	27.42
197.....	1.95	34.37	200.....	2.00	34.38	27.49
296.....	3.49	34.71	300.....	3.50	34.73	27.64
394.....	3.91	34.84	400.....	3.90	34.84	27.69
588.....	3.77	34.87	600.....	3.75	34.87	27.73
780.....	3.55	34.86	800.....	3.50	34.86	27.75
978.....	3.44	34.86	1,000.....	3.40	34.86	27.76
1,177.....	3.42	34.86				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4378; Apr. 14; latitude 46°06.5' N., longitude 46°37' W.; depth 1,060 meters, dynamic height 970.991							
0	11.99	34.29		0	11.99	34.29	26.06
24	11.43	34.92		25	11.40	34.29	26.66
48	10.99	34.96		50	10.95	34.96	26.77
73	9.11	34.76		75	8.90	34.74	26.95
97	6.40	34.61	100	100	6.35	34.61	27.22
145	5.96	34.70	150	150	5.90	34.70	27.35
193		34.78	200	200	5.60	34.79	27.45
290	5.05	34.86	300	300	4.95	34.86	27.59
372	4.41	34.87	400	400	4.30	34.87	27.67
555	3.95	34.88	600	600	3.85	34.88	27.72
735	3.75	34.89	800	800	3.70	34.89	27.75
933	3.66	34.885	(1,000)		3.65	34.89	27.75
Station 4379; Apr. 15; latitude 46°06.5' N., longitude 46°00' W.; depth 1829 meters, dynamic height 971.006							
0	13.30	34.82		0	13.30	34.82	26.22
25	11.97	35.04	25	25	11.97	35.04	26.64
50	12.85	35.31	50	50	12.85	35.31	26.69
76	10.13	34.80	75	75	10.15	34.85	26.83
101	6.63	34.39	100	100	6.65	34.40	27.01
151	6.48	34.72	150	150	6.50	34.71	27.28
202	5.59	34.76	200	200	5.60	34.76	27.43
303	5.15	34.89	300	300	5.15	34.89	27.59
400	4.17	34.84	400	400	4.15	34.84	27.66
597	3.94	34.89	600	600	3.90	34.89	27.73
791	3.75	34.89	800	800	3.70	34.89	27.75
990	3.48	34.86	1,000		3.45	34.86	27.75
1,485	3.40	34.88					
Station 4380; Apr. 15; latitude 46°07.5' N., longitude 45°17' W.; depth 2,834 meters, dynamic height 970.987							
0	12.43	34.69		0	12.43	34.69	26.29
25	9.77	34.47	25	25	9.77	34.47	26.50
50	11.00	34.89	50	50	11.00	34.89	26.71
76	5.11	34.11	75	75	5.10	34.11	26.98
101	5.67	34.44	100	100	5.65	34.43	27.16
152	5.07	34.61	150	150	5.10	34.61	27.38
203		34.72	200	200	4.95	34.71	27.47
304	4.75	34.86	300	300	4.75	34.86	27.61
404	3.96	34.82	400	400	3.95	34.82	27.67
602	3.77	34.86	600	600	3.75	34.86	27.72
			(800)		3.60	34.86	27.74
			(1,000)		3.45	34.87	27.76
Station 4381; Apr. 15; latitude 46°03' N., longitude 44°38' W.; depth 3658 meters, dynamic height 971.187							
0	16.26	36.03		0	16.26	36.03	26.50
21	16.23	36.02	25	25	16.20	36.03	26.50
43	15.93	36.06	50	50	15.80	36.07	26.62
64	15.60	36.08	75	75	15.40	36.05	26.71
85	15.21	35.99	100	100	14.85	35.91	26.72
129	13.73	35.76	150	150	13.50	35.72	26.87
172	13.25	35.68	200	200	12.65	35.62	26.96
257	10.99	35.46	300	300	9.50	35.31	27.25
350	9.20	35.22	400	400	8.05	35.16	27.41
503	6.70	35.09	600	600	5.75	35.04	27.63
870	4.32	34.945	800	800	4.50	34.96	27.72
1,379	3.69	34.92	1,000		4.10	34.94	27.75
Station 4382; Apr. 15; latitude 46°24' N., longitude 44°43' W.; depth 1463 meters, dynamic height 970.986							
0	12.18	34.07		0	12.18	34.07	26.28
24	10.72	34.55	25	25	10.70	34.56	26.51
48	10.08	34.67	50	50	10.05	34.67	26.71
71	8.87	34.58	75	75	8.85	34.50	26.85
95	4.98	34.22	100	100	4.75	34.22	27.11
143	3.94	34.37	150	150	4.00	34.44	27.36
191	5.02	34.72	200	200	5.05	34.76	27.50
286	4.87	34.86	300	300	4.75	34.87	27.62
214	4.47	34.80	400	400	4.30	34.88	27.68
477	4.00	34.88	600	600	3.75	34.87	27.73
655	3.72	34.87	800	800	3.55	34.87	27.75
862	3.55	34.87	(1,000)		3.50	34.87	27.76
Station 4383; Apr. 15; latitude 46°32' N., longitude 44°46' W.; depth 220 meters, dynamic height 970.966							
0	11.47	34.33		0	11.47	34.33	26.18
23	9.83	34.45	25	25	9.80	34.45	26.58
47	8.93	34.29	50	50	8.80	34.29	26.61
70	6.94	34.34	75	75	6.00	34.33	27.04
94	4.04	34.18	100	100	3.80	34.19	27.18
140	3.18	34.40	150	150	3.20	34.44	27.44
187	3.27	34.56	(200)		3.25	34.59	27.55
Station 4384; Apr. 15; latitude 46°44' N., longitude 44°48' W.; depth 169 meters, dynamic height 970.948							
0	11.34	34.33		0	11.34	34.33	26.21
25	8.82	34.48	25	25	8.82	34.48	26.75
50	5.05	34.00	50	50	5.05	34.00	26.90
74	5.60	34.36	75	75	5.60	34.36	27.12
99	3.02	34.30	100	100	3.00	34.30	27.35
149	3.22	34.43	150	150	3.20	34.43	27.43
Station 4385; Apr. 15; latitude 46°48' N., longitude 44°50' W.; depth 132 meters, dynamic height 970.958							
0	10.96	34.31		0	10.96	34.31	26.27
24	10.46	34.48	25	25	10.45	34.48	26.48
48	7.46	34.23	50	50	7.20	34.23	26.80
73	5.02	34.24	75	75	4.90	34.24	27.10
97	2.99	34.22	100	100	2.80	34.21	27.30
Station 4386; Apr. 29; latitude 49°58' N., longitude 48°58' W.; depth 1,902 meters, dynamic height 970.846							
0	4.45	34.37		0	4.45	34.37	27.26
24	4.20	34.39	25	25	4.15	34.39	27.30
48	2.50	34.51	50	50	2.50	34.52	27.57
72	2.79	34.60	75	75	2.80	34.61	27.61
95	2.91	34.64	100	100	2.95	34.65	27.63
143	3.29	34.74	150	150	3.30	34.74	27.67
190	3.33	34.78	200	200	3.35	34.79	27.70
285	3.47	34.84	300	300	3.45	34.84	27.73
375	3.47	34.84	400	400	3.45	34.84	27.73
562	3.34	34.83	600	600	3.35	34.83	27.73
755	3.40	34.84	800	800	3.35	34.85	27.75
949	3.39	34.87	1,000		3.35	34.87	27.77
1,449	3.36	34.88					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4387; Apr. 29; latitude 49°48' N., longitude 49°29' W.; depth 1,408 meters, dynamic height 970.918

0	0.28	33.57	0	0.28	33.57	26.96
24	0.29	33.63	25	0.30	33.63	27.00
48	0.63	33.66	50	0.60	33.67	27.02
72	0.43	33.90	75	0.45	33.94	27.24
97	1.21	34.12	100	1.25	34.14	27.36
145	2.01	34.36	150	2.05	34.38	27.49
193	2.39	34.52	200	2.45	34.53	27.57
290	2.97	34.67	300	3.00	34.68	27.65
607	3.39	34.83	400	3.30	34.76	27.69
766	3.37	34.84	600	3.40	34.83	27.73
1,024	3.39	34.86	800	3.35	34.85	27.73
1,286	3.32	34.86	1,000	3.35	34.86	27.76

Station 4388; Apr. 30; latitude 49°38' N., longitude 50°01' W.; depth 622 meters, dynamic height 970.948

0	0.60	33.20	0	0.60	33.20	26.65
23	0.56	33.20	25	0.55	33.20	26.65
45	0.39	33.26	50	0.25	33.32	26.76
68	-0.21	33.70	75	-0.05	33.81	27.17
90	0.88	33.94	100	0.95	33.98	27.24
135	1.19	34.12	150	1.40	34.19	27.39
180	1.79	34.34	200	2.00	34.41	27.52
270	2.66	34.60	300	2.95	34.67	27.65
335	3.32	34.74	400	3.55	34.81	27.70
524	3.71	34.86	(600)	3.70	34.87	27.74

Station 4389; Apr. 30; latitude 49°30' N., longitude 50°28' W.; depth 338 meters, dynamic height 971.003

0	0.12	33.01	0	0.12	33.01	26.53
24	0.03	33.04	25	0.05	33.04	26.55
48	0.14	33.10	50	0.15	33.10	26.58
72	-0.26	33.10	75	-0.30	33.11	26.61
95	-0.36	33.42	100	-0.35	33.45	26.89
144	0.09	33.77	150	0.20	33.81	27.16
191	1.31	34.18	200	1.50	34.23	27.41
286	2.73	34.61	300	2.90	34.64	27.63

Station 4390; Apr. 30; latitude 49°23' N., longitude 51°01' W.; depth 348 meters, dynamic height 971.017

0	0.43	32.89	0	0.43	32.89	26.40
28	0.42	32.90	25	0.45	32.90	26.41
54	-0.54	33.02	50	-0.45	32.99	26.53
82	-1.00	33.24	75	-0.95	33.18	26.70
108	-0.43	33.46	100	-0.65	33.38	26.85
164	0.85	33.91	150	0.65	33.82	27.14
218	1.23	34.18	200	1.10	34.09	27.33
326	3.06	34.70	300	2.55	34.56	27.60

Station 4391; May 1; latitude 49°12.5' N., longitude 51°30' W.; depth 311 meters, dynamic height 971.040

0	0.32	32.66	0	0.32	32.66	26.23
21	0.40	32.80	25	0.45	32.81	26.35
42	0.70	32.88	50	0.65	32.88	26.39
63	0.47	32.88	75	-0.25	33.04	26.56
83	-0.70	33.18	100	-0.65	33.30	27.78
124	-0.47	33.46	150	0.20	33.66	27.04
165	0.64	33.78	200	1.10	34.00	27.26
227	1.41	34.18	(300)	2.35	34.54	27.59

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4392; May 1; latitude 49°03' N., longitude 51°49' W.; depth 304 meters, dynamic height 971.060

0	0.29	32.16	0	0.29	32.16	25.83
25	0.31	32.16	25	0.31	32.16	25.82
50	0.05	32.60	50	0.05	32.60	26.20
75	-0.45	33.10	75	-0.45	33.10	26.61
100	-0.52	33.42	100	-0.52	33.42	26.88
150	0.23	33.71	150	0.23	33.71	27.05
200	0.93	34.01	200	0.93	34.01	27.27
295	1.70	34.32	300	1.75	34.33	27.47

Station 4393; May 1; latitude 48°59' N., longitude 52°04' W.; depth 300 meters, dynamic height 971.101

0	-0.27	32.77	0	-0.27	32.77	26.34
25	-0.37	32.76	25	-0.31	32.76	26.34
50	-0.40	32.78	50	-0.40	32.78	26.36
74	-0.29	32.82	75	-0.30	32.82	26.38
99	-1.28	32.91	100	-1.30	32.92	26.50
149	-1.50	33.12	150	-1.50	33.12	26.66
199	-0.24	33.52	200	-0.20	33.53	26.95
288	1.16	34.16	(300)	1.30	34.22	27.42

Station 4394; May 1; latitude 48°53' N., longitude 52°23' W.; depth 352 meters, dynamic height 971.089

0	0.41	32.38	0	0.41	32.38	26.00
25	0.21	32.39	25	0.21	32.39	26.02
50	-0.31	32.70	50	-0.31	32.70	26.28
74	-1.64	32.99	75	-1.65	33.00	26.57
99	-1.61	33.09	100	-1.60	33.09	26.64
149	-1.08	33.29	150	-1.05	33.30	26.79
199	0.44	33.73	200	0.45	33.74	27.08
298	1.34	34.24	300	1.35	34.24	27.43

Station 4395; May 1; latitude 48°47.5' N., longitude 52°29' W.; depth 220 meters, dynamic height 971.123

0	0.91	31.74	0	0.91	31.74	25.45
25	0.30	32.02	25	0.30	32.02	25.72
51	-1.53	32.56	50	-1.50	32.55	26.20
76	-1.29	32.76	75	-1.30	32.75	26.36
101	-1.24	32.82	100	-1.25	32.82	26.42
152	-0.68	33.18	150	-0.70	33.17	26.68
203	0.23	33.64	200	0.15	33.62	27.01

Station 4396; May 1; latitude 48°46.5' N., longitude 52°44' W.; depth 159 meters, dynamic height 971.130

0	1.10	31.62	0	1.10	31.62	25.34
25	0.29	32.02	25	0.29	32.02	25.72
50	-1.52	32.48	50	-1.52	32.48	26.15
75	-1.38	32.68	75	-1.38	32.68	26.30
100	-1.32	32.74	100	-1.32	32.74	26.35
150	-0.77	33.11	150	-0.77	33.11	26.66

Station 4397; May 1; latitude 48°43' N., longitude 52°58' W.; depth 77 meters, dynamic height 971.165

0	1.46	31.22	0	1.46	31.22	25.00
25	0.57	31.45	25	0.57	31.45	25.26
49	-0.58	31.94	50	-0.60	31.95	25.69
67	-0.91	32.18	(75)	-1.05	32.27	25.97

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4398; May 1; latitude 48°36' N., longitude 52°45' W.; depth 187 meters, dynamic height 971.139							Station 4404; May 2; latitude 47°44.5' N., longitude 50°54' W.; depth 128 meters, dynamic height 971.077						
0.....	1.18	31.60	0.....	1.18	31.60	25.33	0.....	1.01	32.44	0.....	1.01	32.44	26.02
23.....	-0.34	31.99	25.....	-0.35	32.01	25.73	29.....	1.00	32.43	25.....	1.00	32.44	26.02
47.....	-0.94	32.23	50.....	-1.05	32.27	25.97	59.....	-0.23	32.64	50.....	0.20	32.55	26.14
70.....	-1.52	32.53	75.....	-1.50	32.56	26.21	88.....	-0.99	33.03	75.....	-0.75	32.85	26.42
93.....	-1.48	32.64	100.....	-1.45	32.66	26.29	117.....	-0.91	33.08	100.....	-0.95	33.05	26.59
140.....	-1.22	32.82	(150).....	-1.15	32.86	26.44							
Station 4399; May 1; latitude 48°30.5' N., longitude 52°30' W.; depth 243 meters, dynamic height 971.118							Station 4405; May 2; latitude 47°39' N., longitude 50°36' W.; depth 114 meters, dynamic height 971.076						
0.....	0.84	31.75	0.....	0.84	31.75	25.47	0.....	0.99	32.46	0.....	0.99	32.46	26.03
22.....	-0.12	32.10	25.....	-0.20	32.12	25.82	25.....	0.95	32.46	25.....	0.95	32.46	26.03
44.....	-0.60	32.21	50.....	-0.80	32.27	25.96	51.....	0.63	32.51	50.....	0.65	32.51	26.09
66.....	-1.41	32.46	75.....	-1.45	32.51	26.17	76.....	-0.92	32.90	75.....	-0.95	32.88	26.45
88.....	-1.52	32.58	100.....	-1.45	32.66	26.29	102.....	-0.82	33.12	100.....	-0.80	33.11	26.63
137.....	-1.25	32.97	150.....	-1.35	33.05	26.60							
175.....	-1.58	33.14	200.....	-0.55	33.35	26.81							
206.....	-0.28	33.40											
Station 4400; May 1; latitude 48°18' N., longitude 52°09' W.; depth 183 meters, dynamic height 971.088							Station 4406; May 2; latitude 47°31' N., longitude 50°19' W.; depth 115 meters, dynamic height 971.077						
0.....	0.41	32.31	0.....	0.41	32.31	25.94	0.....	1.57	32.50	0.....	1.57	32.50	26.02
28.....	0.04	32.26	25.....	0.10	32.27	25.93	26.....	1.53	32.50	25.....	1.55	32.50	26.02
57.....	-1.47	32.62	50.....	-1.05	32.50	26.15	52.....	1.11	32.56	50.....	1.20	32.55	26.10
85.....	-1.37	32.74	75.....	-1.40	32.70	26.32	79.....	-0.75	33.02	75.....	-0.55	32.97	26.51
112.....	-1.37	32.86	100.....	-1.35	32.80	26.40	105.....	-0.77	33.01	100.....	-0.75	33.02	26.56
169.....	-0.41	33.44	150.....	-0.80	33.24	26.74							
Station 4401; May 2; latitude 48°12' N., longitude 51°50' W.; depth 187 meters, dynamic height 971.103							Station 4407; May 2; latitude 47°23' N., longitude 49°56' W.; depth 96 meters, dynamic height 971.077						
0.....	-0.05	32.21	0.....	-0.05	32.21	25.88	0.....	1.37	32.52	0.....	1.37	32.51	26.04
25.....	-0.18	32.28	25.....	-0.18	32.28	25.94	28.....	1.40	32.51	25.....	1.40	32.51	26.04
50.....	-0.18	32.30	50.....	-0.18	32.30	25.96	58.....	1.14	32.5	50.....	1.25	32.51	26.05
75.....	-1.41	32.66	75.....	-1.41	32.66	26.29	86.....	-0.82	33.03	75.....	-0.05	32.82	26.37
100.....	-1.31	32.80	100.....	-1.31	32.80	26.40							
150.....	-1.28	32.88	150.....	-1.28	32.98	26.54							
175.....	-0.66	33.24											
Station 4402; May 2; latitude 48°04' N., longitude 51°31' W.; depth 188 meters, dynamic height 971.087							Station 4408; May 2-3; latitude 47°39.5' N., longitude 49°51' W.; depth 115 meters, dynamic height 971.070						
0.....	0.34	32.30	0.....	0.34	32.30	25.93	0.....	1.11	32.47	0.....	1.11	32.47	26.03
24.....	0.32	32.30	25.....	0.30	32.30	25.94	27.....	1.11	32.49	25.....	1.10	32.49	26.04
49.....	0.03	32.34	50.....	0.00	32.35	26.00	53.....	0.96	32.54	50.....	1.05	32.53	26.09
73.....	-1.27	32.81	75.....	-1.25	32.83	26.42	79.....	-0.75	32.99	75.....	-0.60	32.91	26.46
98.....	-1.10	32.94	100.....	-1.10	32.95	26.51	105.....	-0.79	33.18	100.....	-0.75	33.15	26.66
147.....	-0.76	33.20	150.....	-0.75	33.30	26.71							
171.....	-0.74	33.20											
Station 4403; May 2; latitude 47°53.5' N., longitude 51°14' W.; depth 174 meters, dynamic height 971.078							Station 4409; May 3; latitude 47°56.5' N., longitude 49°46' W.; depth 183 meters, dynamic height 971.044						
0.....	0.64	32.38	0.....	0.64	32.38	25.99	0.....	1.13	32.72	0.....	1.13	32.72	26.23
27.....	0.62	32.38	25.....	0.65	32.38	25.99	27.....	1.13	32.72	25.....	1.15	32.72	26.23
52.....	-0.39	32.62	50.....	-0.30	32.60	26.21	54.....	0.87	32.88	50.....	0.95	32.84	26.34
79.....	-1.30	32.87	75.....	-1.25	32.83	26.42	80.....	-1.24	33.17	75.....	-0.95	33.11	26.64
105.....	-1.08	33.00	100.....	-1.15	32.98	26.54	106.....	-0.68	33.36	100.....	-0.80	33.32	26.80
158.....	-0.63	33.25	150.....	-0.70	33.21	26.72	160.....	0.46	33.82	150.....	0.20	33.73	27.08
Station 4410; May 3; latitude 48°09.5' N., longitude 49°41' W.; depth 225 meters, dynamic height 971.084													
0.....	-0.06	32.43	0.....	-0.06	32.43	26.06							
24.....	-0.09	32.44	25.....	-0.05	32.44	26.07							
47.....	-0.25	32.46	50.....	-0.40	32.50	26.13							
71.....	-1.33	32.86	75.....	-1.35	32.89	26.47							
94.....	-1.28	32.98	100.....	-1.15	33.01	26.57							
141.....	-0.32	33.35	150.....	-0.20	33.42	26.87							
188.....	0.35	33.69	(200).....	0.50	33.74	27.08							

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4411; May 3; latitude 48°35.5' N., longitude 49°35' W.; depth 622 meters, dynamic height 970.970						
0.....	0.75	32.67	0.....	0.75	32.67	26.21
25.....	0.78	32.71	25.....	0.78	32.71	26.24
50.....	0.37	33.18	50.....	0.37	33.18	26.64
74.....	0.31	33.78	75.....	0.30	33.79	27.13
100.....	0.74	33.95	100.....	0.74	33.95	27.24
149.....	1.09	34.13	150.....	1.10	34.13	27.36
199.....	1.99	34.40	200.....	2.00	34.40	27.51
299.....	2.73	34.61	300.....	2.75	34.61	27.62
376.....	3.66	34.81	400.....	3.65	34.82	27.70
574.....	3.53	34.86	(600).....	3.50	34.86	27.75

Station 4412; May 3; latitude 48°46' N., longitude 49°33' W.; depth 1,188 meters, dynamic height 970.993

0.....	0.81	32.76	0.....	0.81	32.76	26.28
24.....	0.92	32.82	25.....	0.95	32.83	26.33
47.....	-0.36	33.09	50.....	-0.40	33.13	26.64
71.....	-0.53	33.45	75.....	-0.50	33.50	26.94
95.....	0.29	33.72	100.....	0.45	33.76	27.10
142.....	0.94	34.03	150.....	0.95	34.06	27.31
189.....	1.17	34.19	200.....	1.30	34.23	27.42
284.....	2.35	34.51	300.....	2.55	34.55	27.50
			(400).....	3.35	34.76	27.68
			(600).....	3.70	34.86	27.73
			(800).....	3.50	34.87	27.76
			(1,000).....	3.40	34.86	27.76

Station 4413; May 3; latitude 49°10.5' N., longitude 49°22' W.; depth 1,546 meters, dynamic height 970.933

0.....	0.94	33.10	0.....	0.94	33.10	26.54
24.....	0.58	33.46	25.....	0.60	33.46	26.85
48.....	0.77	33.69	50.....	0.75	33.70	27.04
72.....	0.78	33.95	75.....	0.80	33.98	27.25
96.....	1.91	34.17	100.....	1.95	34.19	27.35
144.....	1.98	34.36	150.....	2.00	34.38	27.49
192.....	2.29	34.50	200.....	2.35	34.52	27.58
288.....	3.14	34.68	300.....	3.20	34.69	27.64
516.....	3.66	34.83	400.....	3.50	34.78	27.68
719.....	3.64	34.87	600.....	3.65	34.85	27.72
874.....	3.50	34.86	800.....	3.55	34.87	27.75
1,222.....	3.33	34.865	1,000.....	3.40	34.86	27.76

Station 4414; May 3; latitude 49°40' N., longitude 49°11' W.; depth 1,664 meters, dynamic height 970.865

0.....	1.49	33.72	0.....	1.49	33.72	27.01
28.....	1.95	33.94	25.....	1.85	33.91	27.13
54.....	2.86	34.32	50.....	2.75	34.26	27.34
82.....	2.80	34.58	75.....	2.80	34.54	27.55
109.....	2.90	34.65	100.....	2.85	34.63	27.62
164.....	3.27	34.76	150.....	3.20	34.73	27.67
219.....	3.41	34.785	200.....	3.40	34.87	27.69
328.....	3.35	34.805	300.....	3.35	34.80	27.71
363.....	3.57	34.84	400.....	3.55	34.84	27.72
543.....	3.44	34.835	600.....	3.40	34.84	27.74
724.....	3.42	34.85	800.....	3.40	34.85	27.75
922.....	3.39	34.845	1,000.....	3.35	34.85	27.75
1,442.....	3.31	34.885				

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4415; May 3; latitude 50°01.5' N., longitude 48°58' W.; depth 2,103 meters, dynamic height 970.854						
0.....	1.93	33.76	0.....	1.93	33.76	27.01
23.....	2.69	34.21	25.....	2.70	34.21	27.30
45.....	2.74	34.21	50.....	2.75	34.29	27.36
68.....	2.70	34.58	75.....	2.70	34.60	27.61
90.....	2.84	34.64	100.....	2.90	34.66	27.65
136.....	3.13	34.72	150.....	3.15	34.73	27.67
182.....	3.23	34.76	200.....	3.25	34.78	27.70
272.....	3.37	34.82	300.....	3.40	34.83	27.73
603.....	3.38	34.82	(400).....	3.50	34.84	27.73
905.....	3.35	34.86	600.....	3.35	34.82	27.72
			800.....	3.35	34.84	27.74
			(1,000).....	3.30	34.87	27.78

Station 4416; May 4; latitude 49°51' N., longitude 48°14' W.; depth 2,415 meters, dynamic height 970.854

0.....	3.29	34.15	0.....	3.29	34.15	27.20
26.....	3.31	34.17	25.....	3.30	34.17	27.22
51.....	2.98	34.48	50.....	3.00	34.47	27.49
77.....	2.92	34.51	75.....	2.95	34.51	27.52
103.....	3.00	34.67	100.....	3.00	34.65	27.63
153.....	3.32	34.77	150.....	3.30	34.77	27.70
205.....	3.36	34.79	200.....	3.35	34.79	27.70
308.....	3.41	34.82	300.....	3.40	34.82	27.73
531.....	3.41	34.84	400.....	3.40	34.83	27.73
711.....	3.35	34.835	600.....	3.40	34.84	27.74
898.....	3.36	34.85	800.....	3.35	34.84	27.74
1,380.....	3.33	34.88	1,000.....	3.30	34.86	27.77

Station 4417; May 4; latitude 49°40' N., longitude 47°38' W.; depth 2,652 meters, dynamic height 970.867

0.....	4.45	34.36	0.....	4.45	34.36	27.25
23.....	4.41	34.36	25.....	4.40	34.36	27.26
45.....	4.38	34.36	50.....	4.20	34.37	27.29
68.....	3.07	34.54	75.....	3.00	34.55	27.55
91.....	2.90	34.56	100.....	2.90	34.58	27.58
136.....	3.08	34.65	150.....	3.15	34.67	27.63
181.....	3.26	34.71	200.....	3.30	34.72	27.66
272.....	3.35	34.37	300.....	3.45	34.80	27.70
288.....	3.49	34.79	400.....	3.45	34.82	27.72
429.....	3.45	34.82	600.....	3.30	34.82	27.74
568.....	3.32	34.825	800.....	3.30	34.83	27.74
729.....	3.31	34.825	1,000.....	3.30	34.84	27.75
1,162.....	3.40	34.85				

Station 4418; May 4-5; latitude 49°15' N., longitude 47°49' W.; depth 2,377 meters, dynamic height 970.866

0.....	4.33	34.32	0.....	4.33	34.32	27.23
25.....	4.32	34.33	25.....	4.32	34.33	27.24
50.....	4.33	34.33	50.....	4.33	34.33	27.23
74.....	2.84	34.31	75.....	2.35	34.41	27.49
99.....	2.80	34.54	100.....	2.80	34.54	27.55
148.....	3.70	34.74	150.....	3.70	34.75	27.64
198.....	3.87	34.82	200.....	3.85	34.82	27.68
267.....	3.69	34.84	300.....	3.60	34.82	27.72
320.....	3.48	34.80	400.....	3.45	34.82	27.72
484.....	3.41	34.825	600.....	3.35	34.83	27.73
653.....	3.37	34.83	800.....	3.30	34.85	27.76
831.....	3.36	34.85	1,000.....	3.30	34.85	27.76
1,305.....	3.33	34.86				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4419; May 5; latitude 48°49' N., longitude 48°01' W.; depth 2,286 meters, dynamic height 970.873						
0	2.98	33.96	0	2.98	33.96	27.08
24	3.31	34.06	25	3.30	34.06	27.13
49	3.91	34.25	50	3.90	34.25	27.22
73	3.40	34.51	75	3.40	34.52	27.49
98	3.50	34.66	100	3.50	34.66	27.59
146	3.08	34.69	150	3.40	34.69	27.65
194	3.41	34.76	200	3.45	34.77	27.68
292	3.82	34.855	300	3.80	34.85	27.71
303	3.79	34.855	400	3.70	34.85	27.72
452	3.66	34.85	600	3.45	34.85	27.74
601	3.49	34.85	800	3.35	34.84	27.74
772	3.40	34.84	1,000	3.30	34.85	27.76
1,286	3.32	34.86				
Station 4420; May 5; latitude 48°28.5' N., longitude 48°19' W.; depth 1,829 meters, dynamic height 970.904						
0	1.10	32.85	0	1.10	32.85	26.34
21	1.04	32.86	25	1.15	33.05	26.50
42	2.56	34.01	50	2.70	34.15	27.25
64	2.73	34.27	75	2.40	34.33	27.42
85	2.08	34.33	100	2.20	34.43	27.52
127	2.52	34.53	150	2.60	34.57	27.60
169	2.69	34.60	200	2.90	34.66	27.65
254	3.35	34.75	300	3.40	34.77	27.69
251	3.36	34.75	400	3.55	34.82	27.71
365	3.50	34.795	600	3.40	34.84	27.74
471	3.72	34.86	800	3.40	34.85	27.75
608	3.43	34.84	1,000	3.35	34.86	27.76
984	3.38	34.86				
Station 4421; May 5; latitude 48°07.5' N., longitude 48°31' W.; depth 622 meters, dynamic height 971.001						
0	1.14	32.82	0	1.14	32.82	26.31
25	0.96	32.80	25	0.96	32.80	26.31
50	-0.59	33.31	50	-0.59	33.31	26.78
76	-0.13	33.58	75	-0.15	33.57	26.99
101	0.35	33.78	100	0.35	33.78	27.12
151	0.98	34.10	150	0.95	34.10	27.34
201	1.22	34.18	200	1.20	34.18	27.39
302	2.26	34.46	300	2.25	34.46	27.54
387	2.84	34.62	400	2.90	34.64	27.63
571	3.67	34.83	(600)	3.65	34.84	27.71
Station 4422; May 5; latitude 48°03' N., longitude 48°35' W.; depth 322 meters, dynamic height 971.003						
0	0.90	32.50	0	0.90	32.50	26.06
25	0.79	32.80	25	0.79	32.80	26.32
50	-0.68	33.33	50	-0.68	33.33	26.81
75	-0.25	33.52	75	-0.25	33.52	26.95
100	0.32	33.74	100	0.32	33.74	27.09
150	0.98	34.06	150	0.98	34.06	27.31
200	1.43	34.23	200	1.43	34.23	27.41
300	2.38	34.50	300	2.38	34.50	27.56
Station 4423; May 5; latitude 47°51.5' N., longitude 48°46' W.; depth 220 meters, dynamic height 971.046						
0	0.46	32.48	0	0.46	32.48	26.08
25	0.36	32.465	25	0.36	32.465	26.07
50	-0.05	32.68	50	-0.05	32.68	26.26
75	-0.34	33.12	75	-0.34	33.12	26.62
100	-0.59	33.38	100	-0.59	33.38	26.84
150	0.59	33.87	150	0.59	33.87	27.18
200	1.00	34.10	200	1.00	34.10	27.34
Station 4424; May 5; latitude 47°40' N., longitude 48°55' W.; depth 169 meters, dynamic height 971.062						
0	1.64	32.53	0	1.64	32.53	26.04
25	1.35	32.54	25	1.35	32.54	26.08
49	1.02	32.58	50	1.00	32.59	26.14
74	-1.08	33.02	75	-1.10	33.03	26.58
99	-0.79	33.18	100	-0.75	33.20	26.71
148	0.49	33.80	150	0.50	33.83	27.15
Station 4425; May 5; latitude 47°43.5' N., longitude 48°26' W.; depth 225 meters, dynamic height 971.036						
0	1.22	32.61	0	1.22	32.61	26.15
25	0.79	32.64	25	0.79	32.64	26.19
50	-0.61	32.94	50	-0.61	32.94	26.49
75	-0.69	33.25	75	-0.69	33.25	26.74
100	-0.25	33.52	100	-0.25	33.52	26.95
150	0.86	33.98	150	0.86	33.98	27.25
200	1.14	34.16	200	1.14	34.16	27.38
Station 4426; May 5; latitude 47°44' N., longitude 48°00' W.; depth 260 meters, dynamic height 971.023						
0	0.92	32.56	0	0.92	32.56	26.11
24	0.79	32.61	25	0.80	32.62	26.17
49	0.88	33.10	50	0.85	33.12	26.57
73	-0.01	33.48	75	0.00	33.50	26.92
97	0.31	33.70	100	0.35	33.73	27.08
146	0.78	34.00	150	0.80	34.02	27.29
194	1.18	34.18	200	1.25	34.20	27.41
243	1.72	34.32				
Station 4427; May 5; latitude 47°49' N., longitude 47°44' W.; depth 297 meters, dynamic height 970.994						
0	1.18	32.83	0	1.18	32.83	26.32
23	0.99	32.98	25	0.95	33.00	26.47
47	0.48	33.26	50	0.45	33.29	26.72
70	0.06	33.52	75	0.10	33.58	26.97
93	0.57	33.85	100	0.65	33.89	27.19
140	1.05	34.08	150	1.20	34.12	27.35
187	1.58	34.29	200	1.70	34.34	27.48
266	2.52	34.54				
Station 4428; May 6; latitude 48°01' N., longitude 47°34' W.; depth 382 meters, dynamic height 970.986						
0	1.52	32.86	0	1.52	32.86	26.31
27	1.35	33.04	25	1.40	33.02	26.45
53	-0.17	33.49	50	-0.10	33.44	26.87
80	0.14	33.66	75	0.05	33.62	27.02
106	0.79	33.94	100	0.65	33.90	27.20
159	1.33	34.17	150	1.25	34.13	27.35
212	1.91	34.38	200	1.75	34.33	27.47
318	3.22	34.72	300	3.00	34.67	27.65

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4429; May 6; latitude 48°21' N., longitude 47°14' W.; depth 1,957 meters, dynamic height 970.927							
0	1.18	32.78		0	1.18	32.78	26.28
27	1.12	32.91		25	1.10	32.89	26.36
53	1.40	34.15		50	1.40	34.02	27.25
80	1.50	34.26		75	1.45	34.25	27.43
106	1.79	34.34		100	1.70	34.32	27.47
160	2.43	34.52		150	2.30	34.49	27.56
213	2.88	34.64		200	2.80	34.62	27.62
319	3.29	34.75		300	3.25	34.74	27.67
381	3.48	34.76		400	3.45	34.77	27.68
568	3.55	34.83		600	3.55	34.84	27.72
753	3.61	34.86		800	3.55	34.86	27.74
946	3.44	34.855		1,000	3.40	34.86	27.76
1,435	3.33	34.87					
Station 4430; May 6; latitude 48°35' N., longitude 46°56' W.; depth 2,451 meters, dynamic height 970.874							
0	3.44	33.92		0	3.44	33.92	27.00
24	3.48	33.96		25	3.50	33.96	27.03
47	3.70	34.10		50	3.70	34.15	27.16
71	3.62	34.45		75	3.55	34.50	27.45
94	3.18	34.60		100	3.20	34.62	27.59
141	3.30	34.70		150	3.35	34.72	27.65
188	3.49	34.77		200	3.50	34.78	27.68
282	3.50	34.82		300	3.50	34.83	27.72
431		34.84		400	3.50	34.84	27.73
904	3.39	34.855		600	3.45	34.85	27.74
1,356	3.32	34.875		800	3.40	34.85	27.75
				1,000	3.35	34.86	27.76
Station 4431; May 6; latitude 48°57' N., longitude 46°35' W.; depth 2,780 meters, dynamic height 970.862							
0	4.55	34.32		0	4.55	34.32	27.21
26	4.52	34.32		25	4.55	34.32	27.21
51	4.46	34.32		50	4.45	34.32	27.22
77	3.12	34.49		75	3.20	34.48	27.47
102	2.92	34.63		100	2.90	34.62	27.62
153	3.32	34.76		150	3.30	34.76	27.69
204	3.43	34.78		200	3.45	34.79	27.69
303	3.48	34.82		300	3.50	34.82	27.72
335	3.54	34.84		400	3.50	34.84	27.73
391	3.40	34.84		600	3.40	34.84	27.74
787	3.40	34.85		800	3.40	34.85	27.75
985	3.37	34.85		1,000	3.35	34.85	27.75
1,483	3.35	34.89					
Station 4432; May 6; latitude 49°19' N., longitude 46°18' W.; depth 3,072 meters, dynamic height 970.901							
0	4.96	34.29		0	4.96	34.29	27.14
21	4.96	34.295		25	4.95	34.30	27.15
45	4.72	34.30		50	4.70	34.30	27.17
69	4.52	34.32		75	4.40	34.36	27.26
89	4.06	34.46		100	3.80	34.49	27.42
134	3.30	34.56		150	3.20	34.57	27.55
178	3.14	34.59		200	3.20	34.63	27.59
267	3.40	34.76		300	3.45	34.78	27.68
372	3.54	34.80		400	3.50	34.81	27.71
561	3.53	34.845		600	3.50	34.84	27.73
754	3.43	34.835		800	3.40	34.84	27.74
948	3.43	34.86		1,000	3.40	34.86	27.76
1,441	3.32	34.86					
Station 4433; May 6; latitude 49°10.5' N., longitude 45°38' W.; depth 2,780 meters, dynamic height 970.882							
0	4.29	34.30		0	4.29	34.30	27.22
26	4.21	34.33		25	4.20	34.33	27.25
52	4.17	34.34		50	4.15	34.34	27.26
79	3.26	34.46		75	3.40	34.43	27.41
105	2.83	34.58		100	2.85	34.56	27.57
156	2.86	34.66		150	2.85	34.66	27.65
209	3.08	34.72		200	3.05	34.71	27.67
314	3.20	34.76		300	3.20	34.76	27.70
394	3.30	34.78		400	3.30	34.78	27.70
588	3.55	34.84		600	3.55	34.84	27.72
782	3.49	34.82		800	3.45	34.82	27.72
981	3.44	34.845		1,000	3.40	34.85	27.75
1,480	3.33	34.845					
Station 4434; May 7; latitude 49°00.5' N., longitude 44°59' W.; depth 1,719 meters dynamic height 970.861							
0	4.75	34.21		0	4.75	34.21	27.10
25	4.04	34.34		25	4.04	34.34	27.28
50	3.70	34.37		50	3.70	34.37	27.34
74	2.87	34.57		75	2.85	34.57	27.58
99	2.84	34.65		100	2.85	34.65	27.64
149	3.13	34.73		150	3.15	34.73	27.67
199	3.27	34.76		200	3.25	34.76	27.69
298	3.36	34.80		300	3.35	34.80	27.21
366	3.49	34.82		400	3.50	34.83	27.72
550	3.46	34.84		600	3.45	34.84	27.73
738	3.44	34.83		800	3.40	34.84	27.74
931	3.39	34.85		1,000	3.35	34.86	27.76
1,424	3.31	34.895					
Station 4435; May 7; latitude 48°39.5' N., longitude 45°20' W.; depth 1,152 meters, dynamic height 970.896							
0	4.45	33.90		0	4.45	33.90	26.88
25	4.35	33.93		25	4.35	33.93	26.91
50	3.77	34.28		50	3.77	34.28	27.26
75	3.10	34.40		75	3.10	34.40	27.42
100	3.18	34.52		100	3.18	34.52	27.51
150	3.18	34.66		150	3.18	34.66	27.62
200	3.20	34.70		200	3.20	34.70	27.65
300	3.61	34.80		300	3.61	34.80	27.69
385	3.79	34.84		400	3.80	34.84	27.70
577	3.50	34.83		600	3.50	34.83	27.72
770	3.47	34.85		800	3.45	34.85	27.74
968	3.36	34.845		1,000	3.30	34.85	27.76
1,091	3.34	34.86					
Station 4436; May 7; latitude 48°24.5' N., longitude 45°54' W.; depth 1,152 meters, dynamic height 970.891							
0	4.61	34.02		0	4.61	34.02	26.97
25	4.34	34.02		25	4.34	34.02	26.99
50	4.00	34.10		50	4.00	34.10	27.09
75	3.00	34.32		75	3.00	34.32	27.37
100	3.01	34.45		100	3.01	34.45	27.47
150	3.27	34.65		150	3.27	34.65	27.60
200	3.67	34.77		200	3.67	34.77	27.66
300	3.79	34.84		300	3.79	34.84	27.70
400	3.83	34.87		400	3.83	34.87	27.73
598	3.57	34.85		600	3.55	34.85	27.73
796	3.43	34.85		800	3.40	34.85	27.75
996	3.38	34.86		1,000	3.35	34.86	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	σ_t

Station 4437; May 7; latitude 47°59' N., longitude 46°26' W.; depth 1,170 meters dynamic height 970.903

0	4.10	33.98	0	4.10	33.98	26.98
23	3.69	33.97	25	3.60	33.97	27.03
45	2.46	34.11	50	3.20	34.13	27.28
68	1.77	34.20	75	1.80	34.23	27.39
91	1.91	34.30	100	1.95	34.32	27.46
136	2.12	34.42	150	2.25	34.46	27.54
181	2.56	34.56	200	2.70	34.60	27.61
272	3.25	34.72	300	3.40	34.75	27.67
285	3.26	34.72	400	3.50	34.85	27.71
437	3.84	34.86	600	3.70	34.86	27.73
595	3.74	34.86	(800)	3.55	34.86	27.74
760	3.60	34.86	(1000)	3.45	34.86	27.75

Station 4438; May 7; latitude 47°54.5' N., longitude 46°05' W.; depth 1,051 meters, dynamic height 970.891

0	4.02	33.85	0	4.02	33.85	26.89
25	3.47	33.95	25	3.47	33.95	27.02
50	3.24	34.20	50	3.24	34.20	27.24
74	2.52	34.30	75	2.50	34.31	27.40
99	2.74	34.49	100	2.75	34.49	27.52
148	2.99	34.61	150	3.60	34.61	27.60
198	3.47	34.73	200	3.50	34.73	27.64
297	3.79	34.83	300	3.80	34.83	27.69
401	3.78	34.84	400	3.75	34.84	27.70
605	3.58	34.86	600	3.55	34.86	27.74
812	3.43	34.86	800	3.40	34.86	27.76
			(1000)	3.35	34.86	27.76

Station 4439; May 7; latitude 47°48.5' N., longitude 45°52' W.; depth 421 meters, dynamic height 970.908

0	3.99	33.77	0	3.99	33.77	26.83
25	3.49	33.78	25	3.49	33.78	26.88
49	3.20	33.98	50	3.15	33.98	27.07
74	2.92	34.12	75	2.90	34.12	27.22
98	2.60	34.22	100	2.60	34.23	27.32
148	3.33	34.56	150	3.35	34.57	27.53
197	3.35	34.66	200	3.35	34.67	27.61
295	3.75	34.84	300	3.75	34.84	27.70
398	3.81	34.86	400	3.80	34.86	27.72

Station 4440; May 7; latitude 47°44' N., longitude 45°42' W.; depth 325 meters, dynamic height 970.964

0	3.84	33.71	0	3.84	33.71	26.80
25	3.50	33.75	25	3.50	33.75	26.86
50	2.84	33.86	50	2.84	33.86	27.01
75	2.92	34.13	75	2.92	34.13	27.22
100	2.21	34.21	100	2.21	34.21	27.35
150	3.89	34.62	150	3.89	34.62	27.52
200	3.61	34.68	200	3.61	34.68	27.59
300	3.70	34.83	300	3.70	34.83	27.70

Station 4441; May 7; latitude 47°27' N., longitude 45°11' W.; depth 230 meters, dynamic height 970.964

0	7.59	33.90	0	7.59	33.90	26.48
25	6.77	33.89	25	6.77	33.89	26.59
49	6.75	33.89	50	6.75	33.89	26.60
74	6.38	33.94	75	6.25	33.94	26.71
99	4.10	34.06	100	4.10	34.06	27.05
148	3.14	34.38	150	3.15	34.39	27.40
207	3.60	34.66	200	3.60	34.63	27.55

Observed values			Scaled values			
Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	σ_t

Station 4442; May 8; latitude 47°22' N., longitude 45°00' W.; depth 188 meters, dynamic height 970.954

0	6.96	33.94	0	6.96	33.94	26.61
29	6.68	33.95	25	6.75	33.95	26.65
59	5.76	33.91	50	6.10	33.92	26.71
88	4.30	34.06	75	5.00	33.95	26.86
117	3.40	34.40	100	3.80	34.19	27.18
176	3.56	34.50	150	3.45	34.46	27.43

Station 4443; May 8; latitude 47°22' N., longitude 45°13' W.; depth 216 meters, dynamic height 970.950

0	7.09	33.89	0	7.09	33.89	26.55
25	6.57	33.88	25	6.57	33.88	26.61
50	6.45	33.90	50	6.45	33.90	26.65
75	4.90	33.98	75	4.90	33.98	26.90
100	3.48	34.20	100	3.48	34.20	27.22
151	3.94	34.56	150	3.95	34.56	27.46
201	4.01	34.67	200	4.00	34.67	27.55

Station 4444; May 8; latitude 47°23' N., longitude 45°33' W.; depth 272 meters, dynamic height 970.940

0	5.20	33.72	0	5.20	33.72	26.67
23	4.90	33.71	25	4.90	33.71	26.69
45	4.66	33.72	50	4.55	33.72	26.73
68	3.31	34.00	75	3.60	34.06	27.10
91	3.36	34.17	100	3.35	34.24	27.26
136	3.55	34.49	150	3.65	34.54	27.47
182	3.98	34.64	200	4.00	34.69	27.56
236	4.01	34.79				

Station 4445; May 8; latitude 47°24' N., longitude 45°57' W.; depth 320 meters, dynamic height 970.952

0	5.46	33.74	0	5.46	33.74	26.65
23	5.47	33.78	25	5.50	33.78	26.68
46	5.45	33.83	50	5.45	33.85	26.74
69	4.62	33.99	75	4.35	34.03	26.99
92	3.96	34.16	100	3.85	34.22	27.21
137	3.53	34.38	150	3.65	34.43	27.38
184	3.85	34.59	200	3.85	34.64	27.53
276	3.80	34.82	(300)	3.80	34.85	27.71

Station 4446; May 8; latitude 47°26' N., longitude 46°18' W.; depth 622 meters, dynamic height 970.912

0	3.18	33.58	0	3.18	33.58	26.75
21	3.13	33.60	25	3.15	33.68	26.84
41	2.91	33.97	50	2.65	34.02	27.16
62	2.34	34.08	75	2.25	34.14	27.28
82	2.22	34.18	100	2.65	34.35	27.42
123	3.14	34.54	150	3.10	34.60	27.58
165	3.10	34.62	200	3.10	34.66	27.63
247	3.19	34.70	300	3.55	34.76	27.66
353	3.85	34.84	400	3.80	34.84	27.70
545	3.76	34.86	(600)	3.70	34.86	27.73

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	σ_t

Station 4447; May 8; latitude 47°23'N., longitude 46°31' W.; depth 1042 meters, dynamic height 970.918

0	3.74	33.77	0	3.74	33.77	26.85
21	3.25	33.79	25	3.25	33.82	26.94
43	3.22	33.99	50	3.25	34.03	27.10
64	3.24	34.14	75	3.10	34.18	27.24
86	2.89	34.23	100	2.65	34.30	27.38
128	2.36	34.42	150	2.30	34.45	27.53
171	2.32	34.48	200	2.45	34.53	27.57
257	2.83	34.62	300	3.25	34.71	27.65
272	3.02	34.67	400	3.80	34.85	27.71
438	3.88	34.87	600	3.80	34.87	27.73
613	3.81	34.87	800	3.55	34.87	27.75
793	3.59	34.87	(1000)	3.45	34.87	27.76

Station 4448; May 8; latitude 47°15'N., longitude 47°11' W.; depth 1,024 meters, dynamic height 970.943

0	2.46	33.37	0	2.46	33.37	26.65
25	2.68	33.64	25	2.68	33.64	26.85
50	2.45	33.99	50	2.45	33.79	27.14
76	2.40	34.14	75	2.40	34.14	27.27
101	1.89	34.23	100	1.90	34.23	27.38
152	2.18	34.40	150	2.15	34.40	27.50
202	2.40	34.49	200	2.40	34.48	27.54
303	3.27	34.70	300	3.25	34.69	27.63
385	3.64	34.79	400	3.65	34.79	27.67
580	3.86	34.83	600	3.80	34.83	27.69
776	3.61	34.855	800	3.55	34.85	27.73
930	3.44	34.855	(1000)	3.35	34.85	27.75

Station 4449; May 9; latitude 47°14'N., longitude 47°36' W.; depth 220 meters, dynamic height 971.060

0	1.34	32.55	0	1.34	32.55	26.08
26	1.06	32.58	25	1.10	32.58	26.12
52	1.17	32.91	50	1.15	32.90	26.47
79	-0.74	33.20	75	-0.80	33.16	26.67
105	-0.38	33.37	100	-0.45	33.33	26.80
156	0.59	33.85	150	0.45	33.79	27.12
209	1.16	34.14	200	1.05	34.10	27.34

Station 4450; May 9; latitude 47°12' N., longitude 47°05' W.; depth 169 meters, dynamic height 971.088

0	1.67	32.56	0	1.67	32.56	26.06
24	1.67	32.57	25	1.65	32.57	26.07
48	1.39	32.56	50	1.35	32.56	26.09
71	-0.96	32.84	75	-0.95	32.88	26.45
95	-0.92	33.10	100	-0.90	33.14	26.67
143	0.09	33.58	(150)	0.20	33.64	27.02

Station 4451; May 9; latitude 47°08' N., longitude 48°27' W.; depth 125 meters, dynamic height 971.087

0	1.93	32.58	0	1.93	32.58	26.06
28	1.77	32.58	25	1.80	32.58	26.07
56	0.22	32.64	50	0.60	32.62	26.18
84	-0.99	33.12	75	-0.80	32.96	26.51
112	-0.61	33.27	100	-0.80	33.21	26.72

Station 4452; May 9; latitude 47°10' N., longitude 49°12' W.; depth 88 meters, dynamic height 971.089

0	2.58	32.60	0	2.58	32.60	26.03
26	2.44	32.61	25	2.45	32.61	26.03
51	1.98	32.65	50	2.05	32.65	26.12
77	-0.58	33.02	75	-0.55	32.98	26.52

Observed values			Scaled values			
Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	Depth, meters	Tem- pera- ture °C.	Salin- ity ‰	σ_t

Station 4453; May 9; latitude 46°46.5' N., longitude 48°44' W.; depth 82 meters, dynamic height 971.044

0	2.73	32.64	0	2.73	32.64	26.05
24	2.23	32.66	25	2.20	32.66	26.10
48	1.99	32.67	50	1.85	32.67	26.14
69	0.00	32.97	(75)	-0.45	33.07	26.59

Station 4454; May 9; latitude 46°46' N., longitude 48°04' W.; depth 117 meters, dynamic height 971.051

0	3.36	32.67	0	3.36	32.67	26.02
26	1.82	32.66	25	1.85	32.66	26.13
51		32.68	50	1.70	32.68	26.16
77	1.10	32.76	75	1.15	32.76	26.26
103	-0.69	33.17	100	-0.60	33.10	26.61

Station 4455; May 9; latitude 46°45' N., longitude 47°33' W.; depth 169 meters, dynamic height 971.024

0	2.30	32.57	0	2.30	32.57	26.03
25	1.16	32.58	25	1.16	32.58	26.12
51	0.74	32.86	50	0.75	32.95	26.44
76	-1.12	33.08	75	-1.10	33.07	26.61
102	-0.53	33.36	100	-0.60	33.35	26.82
153	0.74	33.95	150	0.65	33.90	27.20

Station 4456; May 9; latitude 46°45' N., longitude 47°15' W.; depth 320 meters, dynamic height 970.986

0	3.04	32.81	0	3.04	32.81	26.17
25	1.79	32.84	25	1.79	32.84	26.28
49	1.30	33.06	50	1.30	33.09	26.51
74	1.14	33.68	75	1.10	33.69	27.00
98	0.74	33.86	100	0.75	33.87	27.18
147	1.08	34.12	150	1.15	34.12	27.35
197	1.97	34.35	200	2.00	34.36	27.48
295	2.38	34.50	300	2.40	34.50	27.56

Station 4457; May 9; latitude 46°43.5' N., longitude 47°02' W.; depth 860 meters, dynamic height 970.963

0	2.49	32.86	0	2.49	32.86	26.24
23	1.80	32.88	25	1.75	32.88	26.32
46	1.40	33.15	50	1.30	33.23	26.63
69	0.80	33.78	75	0.80	33.82	27.13
92	0.78	33.91	100	0.85	33.95	27.23
137	1.16	34.12	150	1.35	34.18	27.38
183	1.97	34.34	200	2.10	34.40	27.50
275	2.78	34.62	300	3.05	34.70	27.66
331	3.48	34.77	400	3.70	34.83	27.70
514	3.79	34.88	600	3.65	34.87	27.74
707	3.50	34.87	(800)	3.40	34.87	27.77

Station 4458; May 9; latitude 46°41.5' N., longitude 46°41' W.; depth 1,197 meters, dynamic height 970.936

0	2.72	33.26	0	2.72	33.26	26.54
23	2.24	33.26	25	2.15	33.26	26.59
46	1.48	33.67	50	1.50	33.76	27.04
68	2.60	34.07	75	2.50	34.08	27.21
91	1.91	34.09	100	1.95	34.12	27.30
136	2.52	34.33	150	2.45	34.35	27.43
182	2.32	34.43	200	2.55	34.49	27.54
273	3.74	34.77	300	3.80	34.80	27.67
332	3.85	34.82	400	3.80	34.84	27.70
509	3.81	34.86	600	3.65	34.87	27.74
693	3.55	34.88	800	3.50	34.88	27.76
877	3.49	34.875	1,000	3.40	34.87	27.77
1,019	3.42	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4459; May 10; latitude 46°42' N., longitude 46°22' W.; depth 622 meters, dynamic height 970.922

0.....	4.74	33.58	0.....	4.74	33.58	26.60
25.....	4.23	33.58	25.....	4.23	33.58	26.65
50.....	3.66	33.73	50.....	3.66	33.73	27.83
75.....	2.18	34.06	75.....	2.18	34.06	27.23
100.....	2.49	34.32	100.....	2.49	34.32	27.41
150.....	3.22	34.57	150.....	3.22	34.57	27.55
201.....	3.80	34.72	200.....	3.80	34.72	27.61
301.....	4.03	34.84	300.....	4.05	34.84	27.67
389.....	3.86	34.85	400.....	3.85	34.85	27.70
487.....	3.72	34.87				

Station 4460; May 10; latitude 46°43.5' N., longitude 45°58' W.; depth 324 meters, dynamic height 970.935

0.....	6.94	33.94	0.....	6.94	33.94	26.61
25.....	6.54	33.93	25.....	6.54	33.93	26.65
50.....	6.73	34.00	50.....	6.73	34.00	26.69
75.....	3.84	34.12	75.....	3.84	34.12	27.13
100.....	3.19	34.24	100.....	3.19	34.24	27.28
150.....	3.95	34.54	150.....	3.95	34.54	27.44
200.....	3.96	34.68	200.....	3.96	34.68	27.55
300.....	3.85	34.86	300.....	3.85	34.86	27.71

Station 4461; May 10; latitude 46°44' N., longitude 45°44' W.; depth 265 meters, dynamic height 970.953

0.....	7.59	34.12	0.....	7.54	34.12	26.66
25.....	7.36	34.10	25.....	7.36	34.10	26.68
50.....	7.61	34.16	50.....	7.61	34.16	26.69
74.....	6.12	34.13	75.....	6.00	34.13	26.88
99.....	4.40	34.13	100.....	4.40	34.13	27.07
149.....	4.84	34.59	150.....	4.85	34.59	27.39
198.....	4.18	34.65	200.....	4.15	34.65	27.51
248.....	3.88	34.72				

Station 4462; May 10; latitude 46°45.5' N., longitude 45°22' W.; depth 220 meters, dynamic height 970.948

0.....	6.66	33.92	0.....	6.66	33.92	26.64
23.....	6.17	33.87	25.....	6.10	33.87	26.68
46.....	5.86	33.86	50.....	5.80	33.87	26.71
69.....	5.49	33.92	75.....	5.40	33.96	26.82
92.....	5.15	34.20	100.....	4.95	34.28	27.13
139.....	4.19	34.52	150.....	4.05	34.55	27.44
185.....	3.82	34.61	(200).....	3.75	34.63	27.53

Station 4463; May 10; latitude 46°47' N., longitude 45°00' W.; depth 169 meters, dynamic height 970.929

0.....	6.94	33.97	0.....	6.94	33.97	26.64
25.....	6.57	33.98	25.....	6.57	33.98	26.69
50.....	6.15	33.94	50.....	6.15	33.94	26.72
75.....	3.37	34.13	75.....	3.37	34.13	27.17
101.....	3.01	34.30	100.....	3.00	34.30	27.35
151.....	3.24	34.49	150.....	3.25	34.49	27.47

Station 4464; May 10; latitude 46°47.5' N., longitude 44°51' W.; depth 133 meters, dynamic height 970.936

0.....	6.68	33.90	0.....	6.68	33.90	26.61
26.....	6.25	33.88	25.....	6.30	33.88	26.65
51.....	5.66	33.92	50.....	5.70	33.92	26.77
77.....	4.43	34.05	75.....	4.50	34.03	26.98
102.....	3.67	34.27	100.....	3.70	34.27	27.26
127.....	3.38	34.31				

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4465; May 23; latitude 43°20' N., longitude 50°15' W.; depth 57 meters, dynamic height 971.097

0.....	7.16	32.86	0.....	7.16	32.86	25.74
23.....	3.11	32.89	25.....	3.10	32.89	26.21
42.....	3.13	32.91	(50).....	3.15	32.92	26.24

Station 4466; May 23; latitude 43°03' N., longitude 50°15' W.; depth 76 meters, dynamic height 971.100

0.....	4.49	32.67	0.....	4.49	32.67	25.90
25.....	3.94	32.67	25.....	3.94	32.67	25.96
50.....	1.26	32.78	50.....	1.26	32.78	26.27
75.....	0.67	32.90	75.....	0.67	32.90	26.39
			(100).....	0.35	33.04	26.53

Station 4467; May 23; latitude 42°52' N., longitude 50°15' W.; depth 329 meters, dynamic height 971.076

0.....	5.46	32.67	0.....	5.46	32.67	25.80
25.....	2.93	32.65	25.....	2.93	32.65	26.04
50.....	0.89	32.72	50.....	0.89	32.72	26.24
75.....	-0.32	32.98	75.....	-0.32	32.98	26.51
100.....	-0.42	33.35	100.....	-0.42	33.35	27.82
150.....	1.37	33.93	150.....	1.37	33.93	27.18
200.....	2.65	34.22	200.....	2.65	34.22	27.32
300.....	3.58	34.63	300.....	3.58	34.63	27.55

Station 4468; May 23; latitude 42°39.5' N., longitude 50°14' W.; depth 1,957 meters, dynamic height 971.013

0.....	8.20	33.23	0.....	8.20	33.23	25.88
25.....	7.60	33.69	25.....	7.60	33.69	26.32
50.....	6.00	33.86	50.....	6.00	33.86	26.68
75.....	3.93	33.84	75.....	3.93	33.84	26.88
100.....	3.07	34.12	100.....	3.07	34.12	27.20
150.....	3.81	34.39	150.....	3.81	34.39	27.34
201.....	4.30	34.60	200.....	4.30	34.59	27.45
301.....	4.35	34.76	300.....	4.35	34.76	27.58
398.....	4.92	34.94	400.....	4.90	34.94	27.66
595.....	4.29	34.93	600.....	4.30	34.93	27.71
793.....	4.10	34.98	800.....	4.05	34.93	27.74
993.....	3.72	34.90	1,000.....	3.70	34.90	27.76
1,492.....	3.43	34.87				

Station 4469; May 23; latitude 42°19' N., longitude 50°12' W.; depth 3,017 meters, dynamic height 971.008

0.....	9.82	33.19	0.....	9.82	33.19	25.59
24.....	7.72	33.39	25.....	7.65	33.39	26.08
49.....	5.69	33.41	50.....	5.65	33.41	26.36
73.....	4.77	33.96	75.....	4.60	33.97	26.93
97.....	2.83	34.10	100.....	2.85	34.12	27.22
146.....	3.31	34.35	150.....	3.30	34.37	27.38
195.....	3.40	34.50	200.....	3.40	34.52	27.49
292.....	4.02	34.76	300.....	4.10	34.78	27.62
385.....	5.04	34.98	400.....	5.00	34.98	27.68
578.....	4.35	34.95	600.....	4.30	34.95	27.73
772.....	3.97	34.925	800.....	3.90	34.92	27.76
968.....	3.88	34.92	1,000.....	3.85	34.92	27.76
1,461.....	3.52	34.915				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4470; May 23; latitude 41°58' N., longitude 50°08' W.; depth 3,585 meters, dynamic height 971.085

0	12.56	33.71	0	12.56	33.71	25.50
25	10.89	34.49	25	10.89	34.49	26.41
50	12.36	35.11	50	12.36	35.11	26.63
74	12.28	35.34	75	12.25	35.34	26.82
99	11.25	35.24	100	11.20	35.24	26.94
148	9.23	34.99	150	9.15	34.98	27.09
197	7.03	34.77	200	7.00	34.77	27.26
296	6.44	34.90	300	6.45	34.90	27.43
555	4.79	34.96	400	5.70	34.95	27.57
744	4.43	34.97	600	4.65	34.96	27.71
936	4.18	34.96	800	4.35	34.97	27.75
1,425	3.76	34.94	1,000	4.10	34.96	27.77

Station 4471; May 23; latitude 41°26.5' N., longitude 50°09' W.; depth 3,786 meters, dynamic height 971.143

0	12.84	33.70	0	12.84	33.70	25.44
27	8.63	33.75	25	8.80	33.74	26.18
53	7.65	33.95	50	7.65	33.91	26.49
80	11.46	35.16	75	11.00	35.00	26.79
106	9.99	34.91	100	10.15	34.95	26.90
160	11.20	35.37	150	11.05	35.30	27.01
213	9.61	35.17	200	10.05	35.22	27.13
319	6.84	34.87	300	7.45	34.96	27.34
392	6.39	34.93	400	6.05	34.90	27.49
587	4.63	34.90	600	4.55	34.90	27.67
753	4.24	34.92	800	4.15	34.92	27.73
980	3.86	34.905	1,000	3.80	34.90	27.75
1,474	3.38	34.86				

Station 4472; May 24; latitude 42°03' N., longitude 49°25' W.; depth 3,109 meters, dynamic height 971.093

0	12.58	33.74	0	12.58	33.74	25.52
24	11.54	34.64	25	11.55	34.67	26.44
49	12.50	35.20	50	12.55	35.22	26.67
73	12.59	35.40	75	12.55	35.40	26.81
97	11.07	35.10	100	10.90	35.08	26.87
146	9.20	34.94	150	9.20	34.94	27.06
195	9.70	35.20	200	9.60	35.19	27.18
292	5.43	34.69	300	5.40	34.70	27.41
368	5.27	34.84	400	5.10	34.88	27.59
553	4.55	34.94	600	4.45	34.94	27.71
739	4.27	34.94	800	4.20	34.94	27.74
931	4.09	34.94	1,000	4.00	34.94	27.76
1,421	3.71	34.93				

Station 4473; May 24; latitude 41°34' N., longitude 48°47' W.; depth 3,292 meters, dynamic height 971.151

0	12.02	33.70	0	12.02	33.70	25.60
26	10.88	34.41	25	10.90	34.39	26.34
52	12.33	35.04	50	12.20	35.00	26.57
78	13.86	35.66	75	13.80	35.64	26.74
104	13.46	35.61	100	13.55	35.62	26.78
155	11.18	35.22	150	11.40	35.25	26.92
207	10.70	35.31	200	10.80	35.31	27.07
311	6.70	34.77	300	7.00	34.81	27.29
393	6.23	34.92	400	6.20	34.93	27.49
591	4.97	34.97	600	4.90	34.97	27.69
792	4.19	34.92	800	4.15	34.92	27.73
991	3.83	34.90	1,000	3.80	34.90	27.75
1,492	3.65	34.92				

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4474; May 24; latitude 42°00' N., longitude 47°58' W.; depth 3,658 meters, dynamic height 971.105

0	13.12	33.27	0	13.12	33.27	25.06
26	11.90	34.53	25	11.95	34.50	26.23
51	10.51	34.80	50	10.60	34.80	26.71
77	8.76	34.64	75	8.90	34.64	26.87
102	8.26	34.66	100	8.30	34.66	26.98
155	9.02	34.98	150	9.00	34.95	27.10
206	7.49	34.82	200	7.70	34.84	27.21
308	5.27	34.70	300	5.30	34.70	27.42
334	6.31	34.94	400	5.90	34.97	27.57
510	5.21	34.99	600	4.90	34.98	27.69
693	4.60	34.96	800	4.30	34.94	27.72
875	4.14	34.93	1,000	3.95	34.92	27.75
1,346	3.62	34.90				

Station 4475; May 25; latitude 42°27.5' N., longitude 48°26' W.; depth 3,383 meters, dynamic height 971.042

0	9.38	32.95	0	9.38	32.95	25.46
27	6.12	33.33	25	6.20	33.30	26.20
53	5.45	33.65	50	5.50	33.64	26.56
80	2.12	33.70	75	2.40	33.68	26.90
106	3.77	34.10	100	3.45	34.01	27.08
159	4.16	34.41	150	4.10	34.38	27.30
212	3.64	34.44	200	3.70	34.43	27.38
318	4.90	34.83	300	4.70	34.78	27.55
353	4.52	34.81	400	4.50	34.83	27.61
533	4.49	34.92	600	4.45	34.94	27.71
719	4.41	34.95	800	4.10	34.94	27.75
908	3.81	34.91	1,000	3.75	34.91	27.76
1,395	3.67	34.92				

Station 4476; May 25; latitude 42°40.5' N., longitude 49°09' W.; depth 2,268 meters, dynamic height 971.016

0	10.41	33.38	0	10.41	33.38	25.64
22	8.02	33.33	25	7.75	33.34	26.02
44	6.51	33.70	50	5.75	33.74	26.61
66	3.65	33.82	75	3.15	33.88	26.99
88	2.88	33.97	100	3.00	34.06	27.16
131	3.50	34.37	150	4.50	34.58	27.42
174	5.64	34.82	200	5.55	34.87	27.53
262	5.32	34.92	300	5.20	34.93	27.61
396	4.91	34.93	400	4.90	34.93	27.65
594	4.41	34.95	600	4.40	34.95	27.72
792	3.94	34.89	800	3.90	34.89	27.73
991	3.77	34.89	1,000	3.75	34.89	27.74
1,489	3.58	34.87				

Station 4477; May 25; latitude 43°19' N., longitude 48°47' W.; depth 1,737 meters, dynamic height 971.106

0	13.38	34.08	0	13.38	34.08	25.62
24	14.12	35.08	25	14.15	35.10	26.25
49	13.36	35.27	50	13.35	35.27	26.55
73	12.22	35.23	75	12.15	35.22	26.75
97	10.18	34.91	100	10.15	34.92	26.88
145	10.00	35.09	150	9.90	35.09	27.06
194	9.04	35.04	200	8.85	35.03	27.18
291	5.59	34.70	300	5.40	34.70	27.41
383	4.44	34.73	400	4.35	34.74	27.56
577	3.84	34.83	600	3.80	34.84	27.70
773	3.81	34.86	800	3.80	34.86	27.72
968	3.73	34.87	1,000	3.70	34.87	27.74
1,456	3.53	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4478; May 25; latitude 43°10.5' N., longitude 48°11' W.; depth 3,164 meters, dynamic height 971.169						
0.....	15.04	35.50	0.....	15.04	35.50	26.36
25.....	15.28	35.78	25.....	15.28	35.78	26.52
51.....	15.53	35.86	50.....	15.55	35.86	26.53
76.....	15.25	35.84	75.....	15.25	35.84	26.58
101.....	14.41	35.75	100.....	14.45	35.75	26.69
151.....	12.81	35.47	150.....	12.80	35.48	26.82
202.....	11.59	35.45	200.....	11.60	35.45	27.03
303.....	7.74	34.90	300.....	7.80	34.91	27.25
347.....	7.26	34.96	400.....	6.65	34.96	27.46
531.....	5.36	34.96	600.....	4.85	34.94	27.66
723.....	4.32	34.91	800.....	4.10	34.91	27.73
913.....	3.92	34.90	1,000.....	3.80	34.90	27.75
1,404.....	3.46	34.88				

Station 4479; May 25; latitude 42°51.5' N., longitude 47°28' W.; depth 3,823 meters, dynamic height 971.106.

0.....	13.30	34.64	0.....	13.30	34.64	26.07
25.....	12.34	34.51	25.....	12.34	34.51	26.16
50.....	11.42	34.71	50.....	11.42	34.71	26.49
74.....	10.74	34.73	75.....	10.70	34.73	26.63
99.....	9.61	34.59	100.....	9.50	34.59	26.73
148.....	6.86	34.50	150.....	6.80	34.50	27.07
198.....	6.43	34.66	200.....	6.40	34.66	27.25
297.....	6.01	34.82	300.....	5.90	34.82	27.45
344.....	4.57	34.72	400.....	4.70	34.78	27.55
518.....	4.82	34.92	600.....	4.50	34.92	27.69
693.....	4.21	34.92	800.....	3.95	34.90	27.73
880.....	3.84	34.89	1,000.....	3.70	34.89	27.75
1,367.....	3.55	34.89				

Station 4480; May 25-26; latitude 42°32' N., longitude 46°44' W.; depth 4,207 meters, dynamic height 971.212

0.....	16.01	35.40	0.....	16.01	35.40	26.07
26.....	16.05	35.90	25.....	16.05	35.89	26.43
51.....	15.89	35.94	50.....	15.90	35.94	26.50
77.....	15.55	35.97	75.....	15.55	35.97	26.61
103.....	14.49	35.76	100.....	14.65	35.80	26.68
153.....	13.17	35.56	150.....	13.25	35.58	26.81
205.....	11.05	35.22	200.....	11.20	35.25	26.95
308.....	8.18	34.90	300.....	8.40	34.94	27.18
387.....	4.11	34.44	400.....	4.15	34.47	27.37
579.....	5.47	34.96	600.....	5.35	34.96	27.62
771.....	4.61	34.95	800.....	4.50	34.95	27.71
967.....	4.09	34.92	1,000.....	4.00	34.92	27.75
1,461.....	3.64	34.90				

Station 4481; May 26; latitude 42°57' N., longitude 46°23' W.; depth 4,463 meters, dynamic height 971.246

0.....	14.90	34.84	0.....	14.90	34.84	25.89
25.....	15.43	35.74	25.....	15.43	35.74	26.46
52.....	15.92	36.01	50.....	15.90	36.01	26.56
77.....	15.90	36.04	75.....	15.90	36.04	26.58
103.....	15.70	36.01	100.....	15.70	36.02	26.62
154.....	13.34	35.55	150.....	13.60	35.60	26.75
205.....	11.68	35.34	200.....	11.85	35.36	26.92
308.....	9.00	35.00	300.....	9.15	35.01	27.12
401.....	7.73	35.00	400.....	7.75	35.00	27.33
600.....	4.87	34.86	600.....	4.85	34.86	27.60
799.....	4.74	34.98	800.....	4.75	34.98	27.70
998.....	4.27	34.915	1,000.....	4.25	34.91	27.71
1,494.....	3.71	34.895				

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4482; May 26; latitude 43°20' N., longitude 46°00' W.; depth 4,663 meters, dynamic height 971.251						
0.....	15.72	35.35	0.....	15.72	35.35	26.10
25.....	15.55	35.79	25.....	15.55	35.79	26.47
50.....	15.74	35.98	50.....	15.74	35.98	26.58
75.....	16.08	36.12	75.....	16.08	36.12	26.61
101.....	15.23	35.90	100.....	15.25	35.91	26.63
150.....	13.25	35.54	150.....	13.25	35.54	26.78
201.....	12.47	35.42	200.....	12.50	35.42	26.84
302.....	9.92	35.16	300.....	9.95	35.16	27.11
399.....	7.60	34.94	400.....	7.60	34.94	27.30
600.....	4.68	34.81	600.....	4.65	34.81	27.59
801.....	4.51	34.93	800.....	4.50	34.93	27.69
1,002.....	4.34	34.96	1,000.....	4.30	34.96	27.74

Station 4483; May 26; latitude 43°31.5' N., longitude 46°42' W.; depth 4,298 meters, dynamic height 971.275

0.....	16.94	35.93	0.....	16.94	35.93	26.26
26.....	16.60	36.12	25.....	16.65	36.12	26.47
51.....	16.05	36.06	50.....	16.05	36.06	26.57
77.....	16.03	36.10	75.....	16.05	36.10	26.60
103.....	15.62	36.01	100.....	15.70	36.02	26.62
153.....	14.60	35.81	150.....	14.65	35.82	26.70
205.....	13.07	35.51	200.....	13.25	35.54	26.78
308.....	9.06	34.90	300.....	9.35	34.94	27.03
374.....	8.90	35.09	400.....	8.50	35.07	27.27
563.....	6.03	34.97	600.....	5.65	34.96	27.59
755.....	4.76	34.94	800.....	4.60	34.94	27.69
949.....	4.27	34.93	1,000.....	4.15	34.93	27.73
1,444.....	3.65	34.90				

Station 4484; May 26; latitude 43°43.5' N., longitude 47°18' W.; depth 3,969 meters, dynamic height 971.166

0.....	13.99	34.64	0.....	13.99	34.64	25.93
26.....	13.42	35.07	25.....	13.40	35.07	26.39
52.....	13.86	35.32	50.....	13.85	35.30	26.47
78.....	12.35	35.05	75.....	12.55	35.07	26.56
103.....	11.64	35.04	100.....	11.70	35.04	26.70
154.....	9.95	34.98	150.....	10.10	34.99	26.94
206.....	6.14	34.41	200.....	6.30	34.47	27.12
309.....	8.00	35.05	300.....	7.90	35.01	27.32
342.....	7.23	34.98	400.....	6.55	34.97	27.48
521.....	5.65	34.97	600.....	5.15	34.96	27.65
705.....	4.66	34.94	800.....	4.40	34.93	27.70
896.....	4.26	34.93	1,000.....	4.10	34.93	27.74
1,310.....	3.81	34.92				

Station 4485; May 26; latitude 43°54' N., longitude 47°55' W.; depth 3,658 meters, dynamic height 971.142

0.....	5.40	32.56	0.....	5.40	32.56	25.72
26.....	1.61	32.55	25.....	1.70	32.55	26.06
52.....	-0.64	33.01	50.....	-0.60	32.97	26.51
78.....	-0.73	33.08	75.....	-0.70	33.07	26.60
104.....	-0.54	33.24	100.....	-0.60	33.20	26.70
154.....	4.42	33.98	150.....	4.10	33.92	26.94
206.....	7.70	34.66	200.....	7.70	34.65	27.06
309.....	1.65	34.22	300.....	1.95	34.25	27.40
349.....	1.77	34.26	400.....	2.60	34.43	27.48
521.....	4.60	34.86	600.....	4.50	34.90	27.67
692.....	4.43	34.92	800.....	4.20	34.94	27.74
880.....	4.13	34.94	1,000.....	3.90	34.92	27.76
1,290.....	3.40	34.865				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4486; May 27; latitude 44°5.5' N., longitude 48°27' W.; depth 3,200 meters, dynamic height 971.019						
0.....	4.68	32.50	0.....	4.68	32.50	25.75
24.....	4.86	33.00	25.....	4.85	33.03	26.15
48.....	4.57	33.53	50.....	4.55	33.57	26.62
72.....	3.89	33.86	75.....	3.75	33.89	26.94
96.....	2.93	34.03	100.....	2.85	34.06	27.17
145.....	2.69	34.34	150.....	2.70	34.36	27.42
192.....	3.24	34.53	200.....	3.35	34.56	27.52
288.....	4.33	34.80	300.....	4.30	34.80	27.62
394.....	3.90	34.79	400.....	3.90	34.79	27.65
587.....	4.09	34.87	600.....	4.10	34.87	27.70
779.....	4.09	34.89	800.....	4.05	34.89	27.71
985.....	.....	34.86	1,000.....	3.90	34.86	27.71
1,430.....	3.52	34.87				

Station 4487; May 27; latitude 44°13' N., longitude 48°47' W.; depth 1,646 meters, dynamic height 971.053						
0.....	4.81	32.57	0.....	4.81	32.57	25.80
25.....	3.64	32.50	25.....	3.64	32.50	25.85
51.....	1.04	32.88	50.....	1.05	32.87	26.36
75.....	-0.24	33.30	75.....	-0.24	33.30	26.76
101.....	0.18	33.61	100.....	0.15	33.61	27.00
151.....	1.67	34.14	150.....	1.65	34.14	27.33
202.....	2.04	34.34	200.....	2.05	34.34	27.46
303.....	2.55	34.51	300.....	2.55	34.50	27.55
414.....	3.57	34.73	400.....	3.45	34.71	27.63
619.....	3.88	34.85	600.....	3.85	34.84	27.69
823.....	3.85	34.88	800.....	3.85	34.88	27.72
1,031.....	.....	34.85	1,000.....	3.70	34.85	27.72
1,465.....	3.46	34.83				

Station 4488; May 27; latitude 44°13' N., longitude 48°56' W.; depth 585 meters, dynamic height 971.031						
0.....	5.52	32.52	0.....	5.52	32.52	25.67
25.....	2.74	32.60	25.....	2.74	32.60	26.02
50.....	-0.69	32.97	50.....	-0.69	32.97	26.52
75.....	-0.71	33.18	75.....	-0.71	33.18	26.69
100.....	-0.43	33.36	100.....	-0.43	33.36	26.82
150.....	0.40	33.74	150.....	0.40	33.74	27.09
201.....	0.97	34.00	200.....	0.95	34.00	27.26
301.....	2.59	34.49	300.....	2.60	34.49	27.53
152.....	0.38	33.76	400.....	3.35	34.71	27.64
550.....	3.65	34.80				

Station 4489; May 27; latitude 44°12.5' N., longitude 49°04' W.; depth 139 meters, dynamic height 971.099						
0.....	6.28	32.60	0.....	6.28	32.60	25.65
24.....	1.63	32.70	25.....	1.55	32.71	26.19
48.....	0.36	32.85	50.....	0.25	32.86	26.39
72.....	-0.73	33.01	75.....	-0.75	33.04	26.58
96.....	-0.51	33.24	100.....	-0.45	33.26	26.74
133.....	-0.08	33.44				

Station 4490; May 27; latitude 44°13' N., longitude 49°11' W.; depth 55 meters, dynamic height 971.102						
0.....	5.68	32.62	0.....	5.68	32.62	25.74
24.....	2.28	32.80	25.....	2.25	32.80	26.22
46.....	2.05	32.80	(50).....	2.05	32.80	26.24

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4491; May 27; latitude 44°13' N., longitude 49°23' W.; depth 52 meters, dynamic height 971.114						
0.....	7.85	32.48	0.....	7.85	32.48	25.34
22.....	4.27	32.74	25.....	4.15	32.75	26.00
40.....	3.52	32.76	(50).....	3.35	32.77	26.10

Station 4492; May 27; latitude 44°59' N., longitude 49°24' W.; depth 66 meters, dynamic height 971.105						
0.....	5.91	32.47	0.....	5.91	32.47	25.59
26.....	3.88	32.59	25.....	3.90	32.59	25.91
52.....	1.26	32.68	50.....	1.40	32.67	26.17

Station 4493; May 27; latitude 44°55.5' N., longitude 49°10' W.; depth 119 meters, dynamic height 971.096						
0.....	5.45	32.52	0.....	5.45	32.52	25.68
25.....	2.49	32.64	25.....	2.49	32.64	26.07
50.....	0.53	32.76	50.....	0.53	32.76	26.30
76.....	-0.13	32.83	75.....	-0.10	32.83	26.38
101.....	-0.33	33.05	100.....	-0.30	33.04	26.56

Station 4494; May 27; latitude 44°52.5' N., longitude 48°56' W.; depth 631 meters, dynamic height 971.075						
0.....	4.86	32.56	0.....	4.86	32.56	25.78
25.....	2.29	32.57	25.....	2.29	32.57	26.03
49.....	0.12	32.85	50.....	0.05	32.86	26.40
74.....	-1.29	33.04	75.....	-1.30	33.05	26.60
99.....	-0.52	33.30	100.....	-0.50	33.31	26.78
148.....	0.21	33.66	150.....	0.25	33.67	27.05
197.....	0.96	34.02	200.....	1.00	34.04	27.23
296.....	1.67	34.31	300.....	1.70	34.32	27.47
372.....	2.75	34.57	400.....	2.95	34.62	27.61
564.....	3.49	34.76				

Station 4495; May 28; latitude 44°49.5' N., longitude 48°44' W.; depth 1,527 meters, dynamic height 971.000						
0.....	4.86	32.33	0.....	4.86	32.33	25.60
25.....	3.24	32.76	25.....	3.24	32.76	26.10
50.....	1.58	33.00	50.....	1.58	33.00	26.43
75.....	0.27	33.61	75.....	0.27	33.61	27.00
100.....	2.77	34.03	100.....	2.77	34.03	27.15
151.....	3.42	34.46	150.....	3.40	34.46	27.41
200.....	3.94	34.62	200.....	3.95	34.62	27.61
300.....	4.61	34.84	300.....	4.60	34.84	27.51
391.....	4.27	34.87	400.....	4.20	34.87	27.69
585.....	3.80	34.865	600.....	3.75	34.87	27.73
777.....	3.59	34.88	800.....	3.55	34.88	27.75
976.....	3.48	34.86	1,000.....	3.45	34.86	27.75
1,181.....	3.45	34.86				

Station 4496; May 28; latitude 44°46.5' N., longitude 48°31' W.; depth 2,030 meters, dynamic height 970.972						
0.....	7.23	33.10	0.....	7.23	33.10	25.91
25.....	5.60	33.38	25.....	5.60	33.38	26.34
50.....	5.86	33.91	50.....	5.86	33.91	26.74
75.....	3.83	34.14	75.....	3.83	34.14	27.14
100.....	4.01	34.34	100.....	4.01	34.34	27.28
151.....	2.82	34.42	150.....	2.80	34.42	27.46
201.....	3.39	34.58	200.....	3.40	34.58	27.53
301.....	3.90	34.80	300.....	3.90	34.80	27.66
402.....	3.86	34.82	400.....	3.85	34.82	27.68
599.....	3.83	34.88	600.....	3.80	34.88	27.73
795.....	3.68	34.88	800.....	3.63	34.88	27.74
995.....	3.44	34.85	1,000.....	3.45	34.85	27.74
1,497.....	3.46	34.85				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4497; May 28; latitude 44°38' N., longitude 47°53' W.; depth 3,347 meters, dynamic height 971.004

0.....	6.26	32.50	0.....	6.26	32.50	25.57
25.....	3.93	32.92	25.....	3.93	32.92	26.16
50.....	5.31	33.61	50.....	5.31	33.61	26.56
75.....	2.99	33.57	75.....	2.99	33.57	26.77
100.....	0.69	33.90	100.....	0.69	33.90	27.20
150.....	1.73	34.16	150.....	1.73	34.16	27.34
199.....	2.64	34.44	200.....	2.65	34.45	27.50
299.....	4.30	34.82	300.....	4.30	34.82	27.63
404.....	4.39	34.90	400.....	4.40	34.90	27.68
602.....	4.04	34.91	600.....	4.05	34.91	27.73
799.....	3.78	34.90	800.....	3.75	34.90	27.75
999.....	3.61	34.90	1,000.....	3.60	34.90	27.77
1,500.....	3.45	34.90				

Station 4498; May 28; latitude 44°35.5' N., longitude 47°10' W.; depth 3,749 meters, dynamic height 971.187

0.....	14.71	35.45	0.....	14.71	35.45	26.40
25.....	14.34	35.62	25.....	14.34	35.62	26.61
51.....	14.06	35.66	50.....	14.05	35.66	26.70
76.....	14.31	35.74	75.....	14.30	35.74	26.71
101.....	14.78	35.89	100.....	14.80	35.89	26.71
151.....	14.38	35.79	150.....	14.40	35.80	26.74
202.....	11.58	35.35	200.....	11.75	35.38	26.95
303.....	9.41	35.16	300.....	9.50	35.18	27.19
398.....	6.48	34.84	400.....	6.45	34.84	27.39
599.....	4.98	34.95	600.....	4.95	34.95	27.66
801.....	4.26	34.93	800.....	4.25	34.93	27.72
1,005.....	3.90	34.92	1,000.....	3.90	34.92	27.76
1,476.....	3.54	34.89				

Station 4499; May 28; latitude 44°32.5' N., longitude 46°32' W.; depth 4,024 meters, dynamic height 971.327

0.....	15.79	35.96	0.....	15.79	35.96	26.55
24.....	15.34	36.05	25.....	15.35	36.05	26.72
48.....	15.27	36.04	50.....	15.25	36.04	26.73
72.....	15.28	36.05	75.....	15.30	36.05	26.73
96.....	15.29	36.05	100.....	15.30	36.05	26.73
145.....	15.29	36.05	150.....	15.30	36.05	26.73
193.....	15.27	36.05	200.....	15.25	36.04	26.73
289.....	13.58	35.72	300.....	13.30	35.68	26.87
370.....	11.44	35.40	400.....	10.60	35.30	27.10
563.....	6.90	34.98	600.....	6.40	34.97	27.50
764.....	5.17	34.96	800.....	4.95	34.96	27.67
970.....	4.39	34.94	1,000.....	4.30	34.93	27.71
1,363.....	3.60	34.88				

Station 4500; May 29; latitude 44°22' N., longitude 45°54' W.; depth 3,841 meters, dynamic height 971.284

0.....	6.61	32.66	0.....	6.61	32.66	25.65
26.....	14.32	35.72	25.....	14.25	35.60	26.61
51.....	14.75	35.86	50.....	14.70	35.86	26.72
76.....	14.76	35.88	75.....	14.75	35.88	26.72
101.....	14.75	35.89	100.....	14.75	35.89	26.72
153.....	14.78	35.90	150.....	14.75	35.90	26.73
204.....	14.70	35.89	200.....	14.75	35.90	26.73
305.....	11.24	35.33	300.....	11.45	35.37	27.00
442.....	7.45	34.94	400.....	8.35	35.00	27.24
622.....	5.22	34.92	600.....	5.50	34.92	27.57
826.....	4.52	34.93	800.....	4.60	34.93	27.68
1,041.....	3.99	34.91	1,000.....	4.05	34.91	27.73
1,373.....	3.65	34.90				

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4501; May 29; latitude 44°17.5' N., longitude 45°13' W.; depth 4,207 meters, dynamic height 971.271

0.....	16.97	36.00	0.....	16.97	36.00	26.31
25.....	16.17	35.96	25.....	16.15	35.96	26.47
50.....	16.32	36.15	50.....	16.30	36.14	26.56
75.....	16.35	36.17	75.....	16.35	36.17	26.58
103.....	16.19	36.14	100.....	16.25	36.14	26.58
156.....	14.44	35.79	150.....	14.65	35.83	26.70
208.....	12.67	35.42	200.....	12.95	35.47	26.79
311.....	9.13	34.96	300.....	9.45	35.00	27.06
426.....	6.67	34.79	400.....	7.10	34.81	27.28
633.....	5.09	34.92	600.....	5.30	34.91	27.54
838.....	4.41	34.91	800.....	4.50	34.91	27.68
1,088.....	4.08	34.91	1,000.....	4.20	34.91	27.72
1,500.....	3.57	34.86				

Station 4502; May 29; latitude 44°43' N., longitude 45°06' W.; depth 4,353 meters, dynamic height 971.078

0.....	7.36	32.62	0.....	7.36	32.62	25.52
25.....	3.45	33.21	25.....	3.45	33.21	26.44
50.....	9.63	34.60	50.....	9.63	34.60	26.73
74.....	11.43	35.16	75.....	11.45	35.16	26.84
99.....	7.65	34.54	100.....	7.60	34.54	26.99
148.....	7.13	34.56	150.....	7.10	34.57	27.09
198.....	8.27	34.98	200.....	8.25	34.98	27.24
297.....	5.87	34.79	300.....	5.80	34.79	27.43
375.....	5.00	34.84	400.....	4.95	34.86	27.59
561.....	4.78	34.96	600.....	4.70	34.96	27.70
746.....	4.33	34.95	800.....	4.20	34.95	27.75
941.....	3.99	34.93	1,000.....	3.90	34.92	27.76
1,395.....	3.49	34.89				

Station 4503; May 29; latitude 45°19.5' N., longitude 45°14' W.; depth 4,207 meters, dynamic height 971.042

0.....	9.31	33.42	0.....	9.31	33.42	25.86
25.....	4.26	32.88	25.....	4.26	32.88	26.10
48.....	5.03	33.40	50.....	5.00	33.43	26.45
73.....	2.70	33.60	75.....	2.70	33.61	26.83
97.....	2.99	33.87	100.....	3.00	33.90	27.03
146.....	3.23	34.22	150.....	3.30	34.26	27.29
194.....	6.33	34.84	200.....	6.30	34.84	27.41
291.....	5.21	34.84	300.....	5.10	34.84	27.56
356.....	4.51	34.82	400.....	4.45	34.84	27.63
543.....	4.38	34.92	600.....	4.25	34.91	27.71
736.....	3.97	34.90	800.....	3.85	34.90	27.74
934.....	3.72	34.90	1,000.....	3.65	34.90	27.76
1,307.....	3.53	34.89				

Station 4504; May 29; latitude 45°22.5' N., longitude 46°00' W.; depth 3,475 meters, dynamic height 971.028

0.....	7.80	33.29	0.....	7.80	33.29	25.97
27.....	7.66	33.80	25.....	7.70	33.75	26.36
54.....	6.93	33.88	50.....	7.25	33.87	26.51
81.....	4.68	33.86	75.....	5.35	33.87	26.77
108.....	3.05	33.75	100.....	3.25	33.78	26.91
163.....	3.61	34.36	150.....	3.35	34.20	27.23
216.....	4.22	34.60	200.....	4.05	34.56	27.45
324.....	4.30	34.80	300.....	4.30	34.77	27.60
420.....	4.30	34.84	400.....	4.30	34.82	27.64
630.....	3.91	34.88	600.....	3.95	34.88	27.71
842.....	3.61	34.88	800.....	3.60	34.88	27.75
1,059.....	3.46	34.86	1,000.....	3.45	34.86	27.75
1,457.....	3.41	34.88				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4505; May 29; latitude 45°18' N., longitude 46°48' W.; depth 3,109 meters, dynamic height 970.986							
0	7.38	33.43		0	7.38	33.43	26.15
26	5.41	33.50		25	5.45	33.50	26.46
52	5.29	33.85		50	5.30	33.84	26.74
78	5.01	34.19		75	5.05	34.16	27.03
104	4.19	34.22		100	4.20	34.21	27.16
157	4.43	34.63		150	4.40	34.57	27.43
209	4.65	34.75		200	4.60	34.74	27.53
313	4.03	34.80		300	4.10	34.80	27.64
400	3.74	34.78		400	3.74	34.78	27.65
600	3.76	34.84		600	3.76	34.84	27.70
802	3.54	34.85		800	3.50	34.85	27.74
1,008	3.62	34.88		1,000	3.60	34.88	27.75
1,441	3.35	34.84					
Station 4506; May 30; latitude 45°22' N., longitude 47°32' W.; depth 2,725 meters, dynamic height 971.021							
0	7.61	33.30		0	7.61	33.30	26.01
26	6.60	33.33		25	6.60	33.32	26.17
51	6.55	33.88		50	6.55	33.88	26.62
77	3.18	33.83		75	3.20	33.83	26.95
103	5.30	34.39		100	5.15	34.32	27.14
153	5.45	34.63		150	5.45	34.62	27.34
205	4.96	34.70		200	5.00	34.69	27.45
308	4.71	34.85		300	4.75	34.85	27.60
395	4.29	34.85		400	4.25	34.85	27.66
586	4.11	34.88		600	4.10	34.88	27.70
772	3.89	34.87		800	3.85	34.87	27.72
969	3.69	34.87		1,000	3.60	34.87	27.75
1,423	3.59	34.88					
Station 4507; May 30; latitude 45°33' N., longitude 48°06' W.; depth 1,280 meters, dynamic height 970.990							
0	4.55	32.82		0	4.55	32.82	26.02
25	2.62	32.88		25	2.62	32.88	26.25
50	0.24	33.29		50	0.24	33.29	26.73
76	0.15	33.68		75	0.15	33.67	27.05
101	0.74	33.89		100	0.70	33.88	27.18
150	1.43	34.18		150	1.45	34.18	27.37
200	1.63	34.29		200	1.60	34.29	27.45
301	2.49	34.54		300	2.50	34.54	27.58
326	2.80	34.60		400	3.40	34.74	27.66
497	3.74	34.83		600	3.70	34.87	27.74
672	3.72	34.88		800	3.60	34.88	27.75
856	3.55	34.87		1,000	3.45	34.86	27.75
1,045	3.48	34.86					
Station 4508; May 30; latitude 45°37' N., longitude 48°14' W.; depth 348 meters, dynamic height 971.034							
0	3.54	32.48		0	3.54	32.48	25.85
24	2.56	32.54		25	2.50	32.54	25.99
47	-0.42	32.98		50	-0.40	33.05	26.58
71	-0.31	33.48		75	-0.20	33.53	26.95
94	0.18	33.71		100	0.25	33.74	27.10
141	0.69	33.92		150	0.75	33.94	27.23
189	0.84	34.00		200	0.90	34.02	27.29
283	1.69	34.29		(300)	1.90	34.36	27.49
Station 4509; May 30; latitude 45°40' N., longitude 48°18' W.; depth 156 meters, dynamic height 971.044							
0	3.67	32.48		0	3.67	32.48	25.84
25	0.37	32.78		25	0.37	32.78	26.27
50	-0.83	33.25		50	-0.83	33.25	26.52
75	-0.28	33.49		75	-0.28	33.49	26.55
99	-0.13	33.53		100	-0.10	33.53	26.55
144	-0.05	33.55		150	-0.05	33.55	26.55
Station 4510; May 30; latitude 45°43' N., longitude 48°21' W.; depth 104 meters, dynamic height 971.069							
0	3.86	32.46		0	3.86	32.46	25.80
24	2.03	32.65		25	1.90	32.66	26.13
49	-0.34	32.94		50	-0.40	32.95	26.50
73	-0.86	33.12		75	-0.85	33.13	26.65
93	-0.85	33.20		(100)	-0.80	33.22	26.72
Station 4511; May 30; latitude 45°49.5' N., longitude 48°31' W.; depth 89 meters, dynamic height 971.084							
0	4.86	32.58		0	4.86	32.58	25.80
25	3.31	32.62		25	3.31	32.62	25.98
51	0.28	32.72		50	0.40	32.71	26.26
76	-0.47	33.03		75	-0.45	33.02	26.55
Station 4512; May 30; latitude 46°04.5' N., longitude 48°45' W.; depth 68 meters, dynamic height 971.097							
0	5.67	32.61		0	5.67	32.61	25.74
25	4.61	32.62		25	4.61	32.62	25.85
49	2.36	32.64		50	2.30	32.64	26.09
Station 4513; May 30; latitude 46°19' N., longitude 48°55' W.; depth 68 meters, dynamic height 971.103							
0	5.83	32.63		0	5.83	32.63	25.73
27	4.27	32.64		25	4.45	32.64	25.89
55	2.68	32.64		50	3.00	32.64	26.03
Station 4514; May 30; latitude 46°21.5' N., longitude 48°34' W.; depth 89 meters, dynamic height 971.107							
0	5.99	32.63		0	5.99	32.63	25.71
25	3.86	32.62		25	3.86	32.62	25.93
51	2.19	32.67		50	2.25	32.66	26.10
76	-0.27	32.97		75	-0.20	32.96	26.49
Station 4515; May 30; latitude 46°17.5' N., longitude 48°05' W.; depth 115 meters, dynamic height 971.101							
0	4.77	32.46		0	4.77	32.46	25.71
25	2.96	32.50		25	2.96	32.50	25.91
50	0.34	32.72		50	0.34	32.72	26.27
76	-0.91	33.08		75	-0.90	33.07	26.52
101	-0.77	33.18		100	-0.80	33.18	26.62
Station 4516; May 30; latitude 46°15.5' N., longitude 47°47' W.; depth 169 meters, dynamic height 971.090							
0	3.65	32.42		0	3.65	32.42	25.79
25	2.86	32.46		25	2.86	32.46	25.90
50	-0.03	32.81		50	-0.03	32.81	26.37
75	-1.19	32.99		75	-1.19	32.99	26.55
101	-0.71	33.28		100	-0.70	33.28	26.77
151	0.01	33.53		150	0.00	33.52	26.94

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4517; May 30; latitude 46°11' N., longitude 47°18' W.; depth 622 meters, dynamic height 970.989

0	3.83	32.77	0	3.83	32.77	26.05
25	2.61	32.87	25	2.61	32.87	26.24
50	0.16	33.35	50	0.16	33.35	26.78
75	0.07	33.63	75	0.07	33.63	27.01
100	0.60	33.83	100	0.60	33.83	27.14
150	1.04	34.06	150	1.04	34.06	27.31
200	1.71	34.45	200	1.71	34.45	27.57
300	2.85	34.59	300	2.85	34.59	27.59
396	3.55	34.76	400	3.55	34.76	27.66
593	3.66	34.84	600	3.65	34.84	27.71

Station 4518; May 31; latitude 46°10' N., longitude 47°00' W.; depth 1,307 meters, dynamic height 970.942

0	3.88	32.90	0	3.88	32.90	26.15
25	1.65	32.98	25	1.65	32.98	26.40
50	1.25	33.58	50	1.21	33.58	26.90
76	1.82	34.06	75	1.85	34.05	27.24
101	1.64	34.21	100	1.65	34.21	27.39
151	2.22	34.45	150	2.20	34.45	27.54
202	2.45	34.52	200	2.40	34.52	27.58
303	2.99	34.68	300	2.95	34.67	27.65
301	2.97	34.66	400	3.40	34.77	27.69
500	3.60	34.83	600	3.65	34.86	27.73
699	3.66	34.87	800	3.55	34.87	27.75
899	3.47	34.87	1,000	3.40	34.87	27.77
1,192	3.34	34.87				

Station 4519; May 31; latitude 46°08' N., longitude 46°24' W.; depth 512 meters, dynamic height 970.964

0	4.48	32.76	0	4.48	32.76	25.97
25	4.31	32.76	25	4.31	32.76	26.00
50	1.59	33.43	50	1.59	33.43	26.76
75	0.88	34.02	75	0.88	34.02	27.29
100	1.89	34.23	100	1.89	34.23	27.38
150	3.90	34.58	150	3.90	34.58	27.48
199	4.27	34.74	200	4.25	34.74	27.57
299	4.21	34.83	300	4.20	34.83	27.65
392	4.24	34.89	400	4.20	34.89	27.70
490	3.98	34.88				

Station 4520; May 31; latitude 46°06' N., longitude 45°44' W.; depth 1,866 meters, dynamic height 971.005

0	6.55	33.04	0	6.55	33.04	25.96
25	6.41	33.36	25	6.41	33.36	26.23
50	7.41	33.92	50	7.41	33.92	26.53
76	3.40	33.82	75	3.50	33.82	26.92
101	1.94	33.86	100	1.95	33.86	27.08
151	4.53	34.50	150	4.55	34.50	27.35
202	4.14	34.57	200	4.15	34.57	27.45
303	3.85	34.77	300	3.85	34.77	27.64
403	4.06	34.85	400	4.05	34.85	27.68
601	3.93	34.87	600	3.90	34.87	27.72
800	3.55	34.86	800	3.55	34.86	27.72
1,000	3.50	34.87	1,000	3.50	34.87	27.76
1,500	3.38	34.89				

Station 4521; May 31; latitude 46°04.5' N., longitude 45°13' W.; depth 3,109 meters, dynamic height 970.986

0	7.74	33.08	0	7.74	33.08	25.83
25	6.22	33.63	25	6.22	33.63	26.46
51	1.97	33.63	50	2.00	33.63	26.90
76	5.12	34.25	75	4.90	34.24	27.10
101	7.42	34.79	100	7.40	34.78	27.21
152	6.63	34.82	150	6.65	34.82	27.35
203	6.26	34.90	200	6.25	34.90	27.46
304	5.32	34.96	300	5.35	34.96	27.62
393	4.96	34.96	400	4.85	34.96	27.68
586	3.68	34.85	600	3.65	34.85	27.72
780	3.65	34.87	800	3.60	34.87	27.75
977	3.44	34.86	1,000	3.40	34.86	27.76
1,473	3.34	34.88				

Station 4522; May 31; latitude 46°01' N., longitude 44°38' W.; depth 3,658 meters, dynamic height 970.984

0	8.42	33.61	0	8.42	33.61	26.15
25	7.99	33.87	25	7.99	33.87	26.41
50	5.28	33.74	50	5.28	33.74	26.66
76	2.71	33.78	75	2.70	33.78	26.95
101	4.53	34.30	100	4.55	34.28	27.17
151	4.40	34.51	150	4.40	34.51	27.38
202	4.11	34.64	200	4.10	34.64	27.51
303	4.54	34.84	300	4.35	34.84	27.64
404	4.26	34.86	400	4.20	34.86	27.68
603	3.67	34.87	600	3.65	34.87	27.74
801	3.52	34.85	800	3.50	34.85	27.74
1,002	3.44	34.82	1,000	3.40	34.84	27.74
1,502	3.33	34.85				

Station 4523; May 31; latitude 46°20' N., longitude 44°46' W.; depth 2,286 meters, dynamic height 970.923

0	7.52	33.86	0	7.52	33.86	26.47
25	5.09	33.93	25	5.09	33.93	26.84
50	4.38	34.02	50	4.38	34.02	26.99
75	3.37	34.24	75	3.37	34.24	27.26
101	3.21	34.32	100	3.25	34.32	27.34
151	3.53	34.60	150	3.50	34.60	27.54
201	3.96	34.78	200	3.95	34.78	27.63
302	3.56	34.82	300	3.55	34.82	27.71
393	3.69	34.84	400	3.65	34.84	27.71
586	3.52	34.84	600	3.50	34.84	27.73
779	3.45	34.84	800	3.45	34.84	27.73
976	3.50	34.85	1,000	3.45	34.85	27.74
1,470	3.37	34.84				

Station 4524; May 31; latitude 46°28' N., longitude 44°52' W.; depth 593 meters, dynamic height 970.946

0	7.30	33.92	0	7.30	33.92	26.55
24	6.56	33.87	25	6.55	33.87	26.61
47	5.19	33.96	50	5.05	33.97	26.88
71	4.02	34.04	75	3.90	34.06	27.07
94	3.40	34.22	100	3.30	34.26	27.29
141	2.93	34.47	150	3.00	34.51	27.52
188	3.56	34.66	200	3.60	34.69	27.60
282	3.67	34.78	300	3.65	34.78	27.66
344	3.67	34.78	400	3.65	34.79	27.67
483	3.65	34.80				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4525; June 1; latitude 46°35' N., longitude 44°56' W.; depth 216 meters, dynamic height 970.957

0	7.89	33.89	0	7.89	33.89	26.43
26	6.49	33.90	25	6.55	33.90	26.63
51	4.61	33.94	50	4.65	33.94	26.89
77	4.27	34.03	75	4.30	34.02	27.00
103	3.95	34.23	100	4.00	34.21	27.18
154	2.97	34.42	150	3.00	34.40	27.43
195	3.27	34.60	200	3.25	34.62	27.58

Station 4526; June 1; latitude 46°43.5' N., longitude 45°00' W.; depth 169 meters, dynamic height 970.966

0	8.48	33.91	0	8.48	33.91	26.36
25	7.61	33.90	25	7.61	33.90	26.48
51	6.11	33.96	50	6.15	33.96	26.73
76	4.82	34.04	75	4.90	34.03	26.94
102	3.15	34.22	100	3.15	34.21	27.26
153	3.34	34.44	150	3.30	34.43	27.42

Station 4527; June 1; latitude 46°52' N., longitude 45°04' W.; depth 170 meters, dynamic height 970.985

0	8.25	33.89	0	8.25	33.89	26.38
25	8.01	33.90	25	8.01	33.90	26.43
49	7.03	33.93	50	7.00	33.93	26.59
74	6.65	33.94	75	6.60	33.94	26.66
98	4.52	34.02	100	4.35	34.03	26.99
147	3.35	34.34	150	3.35	34.36	27.36

Station 4528; June 1; latitude 46°52.5' N., longitude 45°13' W.; depth 201 meters, dynamic height 970.984

0	8.33	33.88	0	8.33	33.88	26.36
24	8.03	33.90	25	8.00	33.90	26.43
49	6.85	33.92	50	6.80	33.92	26.62
73	5.53	33.92	75	5.45	33.93	26.80
98	4.60	34.06	100	4.55	34.07	27.01
147	3.47	34.32	150	3.45	34.34	27.33
186	3.27	34.50	(200)	3.25	34.55	27.52

Station 4529; June 1; latitude 46°53' N., longitude 45°20' W.; depth 220 meters, dynamic height 970.967

0	8.36	33.86	0	8.36	33.86	26.35
25	7.04	33.91	25	7.04	33.91	26.57
50	6.90	33.97	50	6.90	33.97	26.64
75	6.46	34.09	75	6.46	34.09	26.79
100	4.05	34.10	100	4.05	34.10	27.09
149	3.25	34.43	150	3.25	34.43	27.42
199	3.41	34.60	200	3.40	34.60	27.55

Station 4530; June 1; latitude 46°54.5' N., longitude 45°46' W.; depth 276 meters, dynamic height 970.974

0	7.96	33.77	0	7.96	33.77	26.33
20	8.01	33.81	25	7.80	33.84	26.41
39	7.19	34.00	50	7.15	34.02	26.65
59	7.09	34.04	75	6.00	34.07	26.84
79	5.71	34.08	100	4.85	34.17	27.06
118	4.11	34.24	150	2.70	34.29	27.36
157	2.59	34.31	200	3.75	34.64	27.54
205	3.81	34.67				

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4531; June 1; latitude 46°56' N., longitude 46°07' W.; depth 320 meters, dynamic height 970.967

0	7.90	33.84	0	7.90	33.84	26.39
26	7.91	33.84	25	7.90	33.84	26.39
51	7.22	33.96	50	7.25	33.95	26.56
77	5.98	34.15	75	6.15	34.14	26.87
102	3.82	34.16	100	4.00	34.16	27.14
153	3.30	34.43	150	3.30	34.41	27.41
204	3.91	34.68	200	3.90	34.66	27.55
306	3.84	34.84	300	3.85	34.84	27.69

Station 4532; June 1; latitude 46°55' N., longitude 46°34' W.; depth 622 meters, dynamic height 970.924

0	5.51	33.18	0	5.51	33.18	26.20
25	5.92	33.68	25	5.92	33.68	26.54
48	2.80	33.92	50	2.50	33.93	27.09
73	1.89	34.11	75	1.90	34.13	27.30
97	2.10	34.29	100	2.15	34.30	27.42
146	3.01	34.51	150	3.05	34.52	27.52
194	3.43	34.66	200	3.45	34.68	27.60
291	4.05	34.86	300	4.05	34.86	27.69
294	4.13	34.86	400	3.80	34.86	27.72
482	3.67	34.86	(600)	3.55	34.86	27.74

Station 4533; June 1; latitude 46°53' N., longitude 47°00' W.; depth 1,170 meters, dynamic height 970.994

0	3.44	32.95	0	3.44	32.95	26.23
25	2.53	34.33	25	2.53	34.33	27.41
50	2.72	34.56	50	2.72	34.56	27.58
76	2.94	34.66	75	2.95	34.66	27.64
101	3.04	34.70	100	3.05	34.70	27.66
151	3.19	34.72	150	3.20	34.72	27.67
202	3.38	34.77	200	3.35	34.77	27.69
303	3.53	34.80	300	3.50	34.80	27.70
460	3.50	34.83	400	3.45	34.82	27.72
684	3.56	34.86	600	3.56	34.85	27.74
910	3.46	34.86	800	3.50	34.86	27.75
1,139	3.34	34.87	1,000	3.40	34.86	27.76

Station 4534; June 1; latitude 46°52.5' N., longitude 47°15' W.; depth 622 meters, dynamic height 970.994

0	3.92	32.70	0	3.92	32.70	25.99
25	2.36	32.84	25	2.36	32.84	26.24
50	-0.25	33.22	50	-0.25	33.22	26.70
75	-0.13	33.58	75	-0.13	33.58	26.99
100	0.45	33.82	100	0.45	33.82	27.15
150	1.20	34.13	150	1.20	34.13	27.35
201	1.89	34.37	200	1.85	34.37	27.50
301	2.74	34.61	300	2.70	34.61	27.62
354	3.00	34.68	400	3.20	34.72	27.67
550	3.62	34.82	600	3.65	34.84	27.71

Station 4535; June 1; latitude 46°52' N., longitude 47°21' W.; depth 309 meters, dynamic height 971.027

0	3.81	32.49	0	3.81	32.49	25.83
25	2.26	32.78	25	2.26	32.78	26.70
50	-0.14	33.12	50	-0.14	33.12	26.62
75	-0.79	33.37	75	-0.79	33.37	26.84
100	0.15	33.66	100	0.15	33.66	27.04
150	1.03	34.07	150	1.03	34.07	27.32
201	1.60	34.30	200	1.60	34.30	27.46
301	1.85	34.35	300	1.85	34.35	27.48

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4536; June 1; latitude 46°51' N., longitude 47°39' W.; depth 169 meters, dynamic height 971.052						
0	4.01	32.51	0	4.01	32.51	25.83
25	2.30	32.57	25	2.30	32.57	26.03
49	-1.20	32.97	50	-1.25	32.98	26.54
74	-1.24	33.17	75	-1.25	33.18	26.70
99	-0.76	33.32	100	-0.75	33.34	26.82
148	0.57	33.86	150	0.60	33.88	27.18
Station 4537; June 1; latitude 46°50' N., longitude 48°11' W.; depth 117 meters, dynamic height 971.085						
0	4.97	32.55	0	4.97	32.55	25.76
25	4.52	32.53	25	4.52	32.53	25.80
50	1.99	32.65	50	1.99	32.65	26.12
76	-0.81	32.90	75	-0.80	32.90	26.46
101	-0.76	33.14	100	-0.75	33.13	26.65
Station 4538; June 2; latitude 46°48' N., longitude 48°43' W.; depth 95 meters, dynamic height 971.082						
0	5.16	32.61	0	5.16	32.61	25.79
24	4.97	32.61	25	4.95	32.61	25.82
49	2.06	32.66	50	2.00	32.66	26.12
83	-0.04	32.98	75	0.45	32.90	26.41
Station 4539; June 2; latitude 46°57' N., longitude 48°04' W.; depth 132 meters, dynamic height 971.077						
0	4.44	32.47	0	4.44	32.47	25.75
24	3.82	32.48	25	3.80	32.48	25.83
49	1.87	32.49	50	1.75	32.49	26.00
73	-0.94	33.02	75	-0.95	33.04	26.58
98	-0.88	33.16	100	-0.85	33.16	26.67
117	-0.75	33.22				
Station 4540; June 2; latitude 47°00.5' N., longitude 47°45' W.; depth 169 meters, dynamic height 971.058						
0	4.06	32.43	0	4.06	32.43	25.76
26	1.65	32.55	25	1.80	32.54	26.04
52	-0.82	32.87	50	-0.65	32.84	26.42
79	-1.30	33.09	75	-1.30	33.06	26.61
105	-1.11	33.24	100	-1.15	33.21	26.73
157	0.47	33.81	150	0.25	33.74	27.10
Station 4541; June 2; latitude 47°04' N., longitude 47°34' W.; depth 220 meters, dynamic height 971.027						
0	3.92	32.39	0	3.92	32.39	25.75
23	1.91	32.61	25	1.60	32.65	26.14
46	-0.84	32.96	50	-0.95	33.02	26.57
69	-1.09	33.19	75	-1.00	33.24	26.75
93	-0.43	33.38	100	-0.30	33.45	26.89
139	0.44	33.80	150	0.60	33.86	27.17
185	1.03	34.09	(200)	1.20	34.18	27.39
Station 4542; June 2; latitude 47°10' N., longitude 47°18' W.; depth 320 meters, dynamic height 970.981						
0	4.07	32.48	0	4.07	32.48	25.80
24	1.67	33.02	25	1.35	33.03	26.46
48	0.03	33.10	50	-0.05	33.13	26.62
71	-0.19	33.55	75	-0.15	33.60	27.01
95	0.45	33.84	100	0.55	33.87	27.19
143	1.11	34.13	150	1.20	34.16	27.38
191	1.71	34.32	200	1.80	34.35	27.49
286	2.68	34.60	300	2.80	34.63	27.62
Station 4543; June 2; latitude 47°18' N., longitude 47°04' W.; depth 1,005 meters, dynamic height 970.935						
0	3.63	32.97	0	3.63	32.97	26.23
25	3.01	33.18	25	3.01	33.18	26.46
50	2.00	33.75	50	2.00	33.75	26.99
75	0.24	33.84	75	0.24	33.84	27.18
100	1.14	34.08	100	1.14	34.08	27.31
150	2.05	34.40	150	2.05	34.40	27.51
199	2.40	34.52	200	2.40	34.52	27.58
299	3.15	34.72	300	3.15	34.72	27.67
389	3.55	34.81	400	3.50	34.81	27.71
583	3.70	34.88	600	3.70	34.88	27.74
777	3.51	34.87	800	3.45	34.87	27.76
883	3.43	34.87	(1,000)	3.35	34.87	27.77
Station 4544; June 2; latitude 47°15' N., longitude 46°32' W.; depth 842 meters, dynamic height 970.918						
0	4.77	33.21	0	4.77	33.21	26.31
24	3.18	33.22	25	3.20	33.24	26.49
49	3.78	34.02	50	3.80	34.05	27.07
73	2.98	34.27	75	2.85	34.27	27.34
97	1.83	34.32	100	1.85	34.33	27.46
146	2.32	34.49	150	2.35	34.50	27.56
195	2.85	34.61	200	2.85	34.62	27.62
292	3.52	34.77	300	3.55	34.78	27.67
383	3.67	34.83	400	3.65	34.84	27.71
576	3.68	34.87	600	3.65	34.87	27.74
770	3.51	34.87	800	3.45	34.87	27.76
Station 4545; June 2; latitude 47°18' N., longitude 45°57' W.; depth 318 meters, dynamic height 970.949						
0	7.28	33.62	0	7.28	33.62	26.32
25	6.75	33.68	25	6.75	33.68	26.43
51	6.84	34.02	50	6.85	34.01	26.68
76	3.07	34.04	75	3.10	34.04	27.13
102	3.38	34.24	100	3.35	34.23	27.25
151	3.07	34.46	150	3.10	34.46	27.47
202	3.77	34.66	200	3.75	34.66	27.56
304	3.90	34.83	300	3.90	34.83	27.68
Station 4546; June 2; latitude 47°19' N., longitude 45°35' W.; depth 261 meters, dynamic height 970.957						
0	6.42	33.28	0	6.42	33.28	26.17
25	6.24	33.53	25	6.24	33.53	26.38
50	6.33	33.85	50	6.33	33.85	26.62
74	6.32	33.90	75	6.30	33.90	26.67
99	1.99	34.13	100	2.00	34.14	27.30
149	2.66	34.41	150	2.70	34.50	27.53
198	4.06	34.73	200	4.10	34.73	27.58
248	4.11	34.78				
Station 4547; June 2; latitude 47°21' N., longitude 45°19' W.; depth 220 meters, dynamic height 970.960						
0	6.55	33.41	0	6.55	33.41	26.25
25	6.62	33.66	25	6.62	33.66	26.43
50	5.41	33.74	50	5.41	33.74	26.65
76	3.84	34.10	75	3.85	34.10	27.11
101	2.80	34.21	100	2.80	34.21	27.30
152	3.63	34.46	150	3.60	34.45	27.41
202	3.83	34.61	200	3.85	34.60	27.50

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4548; June 2; latitude 47°23' N., longitude 45°00' W.; depth 183 meters, dynamic height 970.953

0	8.08	33.87	0	8.08	33.87	26.39
24	7.22	33.90	25	7.20	33.90	26.54
48	6.15	33.86	50	6.05	33.86	26.67
72	5.02	34.05	75	4.85	34.08	26.96
95	3.89	34.21	100	3.85	34.24	27.22
162	3.65	34.53	150	3.70	34.48	27.42

Station 4549; June 3; latitude 47°28' N., longitude 45°11' W.; depth 220 meters, dynamic height 970.956

0	7.52	33.80	0	7.52	33.80	26.42
25	7.30	33.80	25	7.30	33.80	26.45
50	6.21	33.94	50	6.21	33.94	26.71
75	4.60	33.95	75	4.60	33.95	26.91
100	3.80	34.14	100	3.80	34.14	27.14
148	3.91	34.52	150	3.90	34.52	27.44
198	3.81	34.64	200	3.80	34.64	27.54

Station 4550; June 3; latitude 47°45' N., longitude 45°42' W.; depth 320 meters, dynamic height 970.940

0	6.37	33.17	0	6.37	33.17	26.08
20	5.53	33.44	25	5.55	33.50	26.36
40	5.68	33.66	50	5.00	33.74	27.09
61	3.81	33.84	75	2.60	34.04	27.33
81	2.50	34.10	100	2.40	34.21	27.41
121	2.27	34.29	150	2.25	34.38	27.54
161	2.22	34.42	200	3.60	34.63	27.62
242	4.17	34.82	(300)	4.05	34.86	27.69

Station 4551; June 3; latitude 47°50' N., longitude 45°51' W.; depth 430 meters, dynamic height 970.920

0	5.64	33.06	0	5.64	33.06	26.08
26	3.76	33.17	25	3.85	33.17	26.36
51	1.96	33.90	50	2.05	33.88	27.09
76	1.29	34.11	75	1.30	34.11	27.33
101	2.03	34.28	100	2.00	34.27	27.41
153	3.11	34.56	150	3.10	34.55	27.54
204	3.23	34.67	200	3.20	34.66	27.62
305	3.90	34.86	300	3.90	34.85	27.70
410	3.81	34.86	400	3.75	34.86	27.72

Station 4552; June 3; latitude 47°57' N., longitude 46°10' W.; depth 1,051 meters, dynamic height 970.892

0	5.07	33.24	0	5.07	33.24	26.29
25	3.92	33.81	25	3.92	33.81	26.86
50	3.98	34.20	50	3.98	34.20	27.17
76	2.68	34.34	75	2.70	34.34	27.40
101	2.71	34.45	100	2.70	34.46	27.50
150	2.94	34.60	150	2.95	34.60	27.59
200	3.49	34.76	200	3.49	34.76	27.67
301	3.73	34.85	300	3.75	34.85	27.71
399	3.56	34.83	400	3.50	34.83	27.72
596	3.54	34.86	600	3.50	34.86	27.75
792	3.45	34.87	800	3.45	34.87	27.76
1,008	3.34	34.87	1,000	3.35	34.87	27.77

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t

Station 4553; June 3; latitude 47°58.5' N., longitude 46°23' W.; depth 1,188 meters, dynamic height 970.915

0	4.51	33.32	0	4.51	33.32	26.41
25	4.58	33.57	25	4.58	33.57	26.41
50	4.10		50	4.10	33.90	26.92
76	3.56	34.23	75	3.55	34.22	27.23
101	2.76	34.40	100	2.75	34.39	27.44
151	2.87	34.56	150	2.85	34.56	27.57
201	3.20	34.69	200	3.20	34.69	27.64
302	3.77	34.84	300	3.80	34.84	27.70
402	3.83	34.87	400	3.85	34.87	27.72
604	3.52	34.86	600	3.50	34.86	27.75
806	3.46	34.86	800	3.45	34.86	27.75
1,011	3.35	34.86	1,000	3.35	34.86	27.76

Station 4554; June 4; latitude 47°45.5' N., longitude 47°14' W.; depth 400 meters, dynamic height 970.989

0	2.42	32.79	0	2.42	32.79	26.20
24	2.42	32.79	25	2.40	32.79	26.20
48	1.21	33.10	50	1.05	33.14	26.58
72	-0.17	33.45	75	-0.20	33.51	26.94
96	0.44	33.83	100	0.50	33.85	27.17
144	1.10	34.09	150	1.15	34.12	27.35
192	1.61	34.30	200	1.70	34.33	27.47
288	2.62	34.56	300	2.75	34.58	27.59
360	3.19	34.70	(400)	3.40	34.76	27.68

Station 4555; June 4; latitude 47°45' N., longitude 47°34' W.; depth 320 meters, dynamic height 971.037

0	3.97	32.48	0	3.97	32.48	25.81
24	2.96	32.48	25	2.90	32.48	25.91
49	0.24	32.99	50	0.20	33.01	26.52
73	-0.87	33.32	75	-0.85	33.32	26.80
97	-0.28	33.48	100	-0.70	33.50	26.95
145	0.60	33.82	150	0.65	33.84	27.15
194	1.05	34.06	200	1.10	34.08	27.32
291	2.18	34.44	300	2.30	34.47	27.55

Station 4556; June 4; latitude 47°38' N., longitude 48°12' W.; depth 220 meters, dynamic height 971.093

0	2.84	32.40	0	2.85	32.40	25.85
27	2.82	32.40	25	2.85	32.40	25.85
52	2.43	32.43	50	2.50	32.42	25.89
79	-1.27	33.02	75	-1.15	32.93	26.50
105	-1.29	33.16	100	-1.30	33.13	26.66
158	-0.03	33.61	150	-0.25	33.53	26.95
210	0.78	33.95	200	0.65	33.87	27.18

Station 4557; June 4; latitude 47°32' N., longitude 48°30' W.; depth 169 meters, dynamic height 971.082

0	3.30	32.38	0	3.30	32.38	25.79
25	3.25	32.40	25	3.25	32.40	25.82
49	1.94	32.71	50	1.90	32.72	26.17
74	-0.40	32.94	75	-0.40	32.94	26.49
98	-1.52	33.14	100	-1.30	33.15	26.68
147	0.19	33.69	150	0.25	33.72	27.09

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4558; June 4; latitude 47°23' N., longitude 48°54' W.; depth 135 meters, dynamic height 971.077						
0	3.72	32.44	0	3.72	32.44	25.81
24	3.66	32.45	25	3.65	32.45	25.82
48	0.74	32.66	50	0.50	32.68	26.24
73	-1.27	32.99	75	-1.25	33.01	26.57
97	-0.88	33.17	100	-0.85	33.18	26.69
121	-0.69	33.24				

Station 4559; June 4; latitude 47°13' N., longitude 49°18' W.; depth 86 meters, dynamic height 971.082

0	3.70	32.42	0	3.70	32.42	25.79
26	3.70	32.44	25	3.70	32.44	25.81
51	1.65	32.57	50	1.85	32.56	26.05
77	-0.82	33.10	75	-0.65	33.05	26.58

Station 4560; July 14; latitude 50°01.5' N., longitude 48°58' W.; depth 1,866 meters, dynamic height 970.857

0	8.05	33.22	0	8.05	33.22	25.89
22	4.00	34.22	25	3.75	34.24	27.23
43	2.87	34.32	50	2.90	34.39	27.43
65	2.94	34.54	75	3.00	34.58	27.57
86	3.01	34.62	100	3.10	34.77	27.64
129	3.28	34.74	150	3.30	34.76	27.69
172	3.34	34.78	200	3.35	34.79	27.70
258	3.41	34.82	300	3.40	34.84	27.74
314	3.46	34.84	400	3.40	34.84	27.74
467	3.40	34.84	600	3.35	34.85	27.75
620	3.39	34.85	800	3.30	34.86	27.77
798	3.33	34.86	1,000	3.30	34.86	27.77
1,283	3.27	34.87				

Station 4561; July 14; latitude 49°47' N., longitude 49°29' W.; depth 1,307 meters, dynamic height 970.872

0	8.04	32.87	0	8.04	32.87	25.62
26	2.25	34.13	25	2.50	34.08	27.21
52	1.91	34.33	50	1.90	34.32	27.46
78	2.77	34.51	75	2.65	34.49	27.53
104	3.01	34.62	100	3.00	34.61	27.60
155	3.27	34.74	150	3.25	34.73	27.66
207	3.40	34.80	200	3.40	34.79	27.70
311	3.43	34.83	300	3.45	34.83	27.72
411	3.43	34.84	400	3.45	34.84	27.73
616	3.43	34.84	600	3.40	34.84	27.74
821	3.40	34.86	800	3.40	34.86	27.76
1,027	3.36	34.86	1,000	3.35	34.86	27.76
1,250	3.29	34.86				

Station 4562; July 14; latitude 49°37' N., longitude 50°01' W.; depth 622 meters, dynamic height 970.968

0	8.49	32.70	0	8.49	32.70	25.41
24	0.25	33.00	25	0.20	33.02	26.52
49	-0.55	33.44	50	-0.55	33.46	26.91
73	-0.15	33.68	75	-0.10	33.70	27.08
97	0.42	33.87	100	0.45	33.89	27.20
146	1.70	34.25	150	1.75	34.27	27.43
194	2.39	34.47	200	2.45	34.49	27.54
291	3.20	34.71	300	3.25	34.72	27.66
376	3.26	34.76	400	3.50	34.77	27.70
564	3.44	34.83	(600)	3.45	34.83	27.72

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4563; July 14; latitude 49°28' N., longitude 50°31' W.; depth 320 meters, dynamic height 971.031						
0	9.67	32.68	0	9.67	32.68	25.22
23	2.38	32.84	25	1.75	32.85	26.30
47	-0.60	33.01	50	-0.80	33.03	26.57
70	-1.31	33.17	75	-1.30	33.20	26.72
94	-1.10	33.34	100	-1.00	33.38	26.86
141	0.05	33.72	150	0.20	33.78	27.13
187	0.99	34.02	200	1.30	34.11	27.33
281	2.88	34.66	300	3.20	34.78	27.71

Station 4564; July 15; latitude 49°17' N., longitude 51°00' W.; depth 331 meters, dynamic height 971.027

0	9.67	32.67	0	9.67	32.67	25.21
24	3.60	32.88	25	3.50	32.88	26.17
50	1.50	32.94	50	1.50	32.94	26.38
74	-0.69	33.33	75	-0.70	33.34	26.82
100	-0.43	33.59	100	-0.45	33.59	27.01
149	0.81	33.91	150	0.80	33.92	27.21
198	1.34	34.19	200	1.35	34.20	27.40
298	2.84	34.64	300	2.85	34.65	27.64

Station 4565; July 15; latitude 49°07' N., longitude 51°31' W.; depth 304 meters, dynamic height 971.075

0	10.37	33.12	0	10.37	33.12	24.67
25	2.90	32.62	25	2.90	32.62	26.02
49	0.44	32.74	50	0.45	32.75	26.30
74	-0.45	33.08	75	-0.45	33.03	26.10
99	-1.06	33.19	100	-1.05	33.21	26.73
148	-0.10	33.68	150	-0.10	33.70	27.08
197	0.84	33.94	200	0.85	33.96	27.24
286	2.00	34.40	(300)	2.20	34.47	27.56

Station 4566; July 15; latitude 49°02' N., longitude 51°51' W.; depth 311 meters, dynamic height 971.084

0	10.51	32.17	0	10.51	32.17	24.68
23	2.43	32.69	25	1.75	32.70	26.17
46	-1.03	32.85	50	-1.20	32.88	26.46
69	-1.55	33.02	75	-1.55	33.06	26.62
91	-1.45	33.14	100	-1.40	33.20	26.73
137	-1.01	33.39	150	-0.85	33.47	27.13
182	-0.23	33.67	200	0.15	33.77	27.38
273	1.46	34.18	(300)	1.90	34.32	27.46

Station 4567; July 15; latitude 48°58' N., longitude 52°04' W.; depth 293 meters, dynamic height 971.092

0	10.07	33.16	0	10.07	32.16	24.75
23	3.49	32.58	25	3.15	32.60	25.99
46	-0.63	32.79	50	-1.00	32.83	26.41
69	-1.58	33.01	75	-1.60	33.04	26.60
92	-1.53	33.13	100	-1.50	33.16	26.69
138	-1.23	33.32	150	-1.05	33.40	26.88
184	-0.21	33.66	200	0.15	33.77	27.13
258	1.27	34.12				

Station 4568; July 15; latitude 48°53' N., longitude 52°24' W.; depth 344 meters, dynamic height 971.096

0	9.90	32.14	0	9.90	32.14	24.76
25	1.79	32.64	25	1.79	32.64	26.12
49	-1.28	32.84	50	-1.30	32.85	26.44
74	-1.52	33.00	75	-1.50	33.01	26.58
99	-1.46	33.11	100	-1.45	33.11	26.65
148	-0.19	33.36	150	-0.90	33.36	26.84
197	-0.19	33.64	200	-0.15	33.66	27.06
296	1.83	34.35	300	1.90	34.37	27.50

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4569; July 15; latitude 48°48' N., longitude 52°39' W.; depth 220 meters, dynamic height 971.111							
0	11.33	31.50		0	11.33	31.50	24.02
23	1.43	32.52		25	1.25	32.55	25.08
46	-0.61	32.81		50	-1.00	32.85	26.43
69	-1.56	33.00		75	-1.55	33.03	26.59
93	-1.85	33.10		100	-1.50	33.13	26.67
139	-1.12	33.36		150	-0.95	33.42	26.90
185	-0.22	33.58		(200)	0.25	33.64	27.02
Station 4570; July 15; latitude 48°46' N., longitude 52°44' W.; depth 157 meters, dynamic height 971.195							
0	11.94	31.56		0	11.94	31.56	23.96
24	2.08	32.51		25	1.80	32.54	26.04
48	-0.70	32.74		50	-0.75	32.77	26.36
72	-1.37	32.90		75	-1.40	32.91	26.49
96	-1.58	33.00		100	-1.60	33.02	26.59
139	-1.42	33.14		150	-1.30	33.17	26.70
Station 4571; July 15; latitude 48°44' N., longitude 52°58' W.; depth 98 meters, dynamic height 971.147							
0	12.35	31.27		0	12.35	31.27	23.66
25	1.71	32.40		25	1.71	32.40	25.94
51	-0.68	32.62		50	-0.65	32.62	26.24
86	-1.26	32.76		75	-1.15	32.72	26.33
Station 4572; July 15; latitude 48°48' N., longitude 52°45' W.; depth 174 meters, dynamic height 971.143							
0	12.79	31.26		0	12.79	31.26	23.56
25	-0.04	32.42		25	-0.04	32.42	26.06
50	-1.10	32.62		50	-1.10	32.62	26.26
75	-1.27	32.77		75	-1.27	32.77	26.38
100	-1.22	32.84		100	-1.22	32.84	26.45
150	-1.41	33.03		150	-1.41	33.03	26.59
Station 4573; July 15; latitude 48°34' N., longitude 52°36' W.; depth 263 meters, dynamic height 971.129							
0	12.26	31.52		0	12.26	31.52	23.67
25	0.88	32.54		25	0.88	32.54	26.10
50	-0.36	32.73		50	-0.36	32.73	26.31
74	-1.32	32.85		75	-1.35	32.85	26.44
99	-1.53	32.96		100	-1.55	32.96	26.54
149	-1.37	33.14		150	-1.35	33.04	26.60
198	-0.77	33.41		200	-0.75	33.42	26.89
248	0.39	33.80					
Station 4574; July 15; latitude 48°21.5' N., longitude 52°11' W.; depth 185 meters, dynamic height 971.115							
0	11.36	31.48		0	11.36	31.48	24.00
25	1.68	32.47		25	1.68	32.47	25.99
50	-1.16	32.72		50	-1.16	32.72	26.33
75	-1.39	32.89		75	-1.39	32.89	26.47
101	-1.47	32.98		100	-1.45	32.97	26.54
151	-0.95	32.25		150	-1.00	33.24	26.75
Station 4575; July 15; latitude 48°14' N., longitude 51°52' W.; depth 183 meters, dynamic height 971.117							
0	11.53	31.46		0	11.53	31.46	23.95
25	-0.03	32.43		25	-0.03	32.43	26.06
50	-1.28	32.70		50	-1.28	32.70	26.32
75	-1.45	32.87		75	-1.45	32.87	26.46
100	-1.56	32.97		100	-1.56	32.97	26.55
150	-1.31	33.18		150	-1.31	33.18	26.70
Station 4576; July 15-16; latitude 48°05.5' N., longitude 51°33' W.; depth 220 meters, dynamic height 971.107							
0	11.25	31.39		0	11.25	31.39	23.95
25	4.09	32.17		25	4.09	32.17	25.55
50	-0.87	32.80		50	-0.87	32.80	26.39
75	-1.45	33.03		75	-1.45	33.03	26.59
100	-1.35	33.16		100	-1.35	33.16	26.69
149	-0.04	33.58		150	-0.05	33.59	26.99
199	0.27	33.71		200	0.30	33.71	27.07
Station 4577; July 16; latitude 47°57.5' N., longitude 51°15' W.; depth 155 meters, dynamic height 971.103							
0	11.56	31.58		0	11.56	31.58	24.04
25	3.11	32.20		25	3.11	32.20	25.67
50	-0.77	32.71		50	-0.77	32.71	26.31
75	-1.16	32.99		75	-1.16	32.99	26.55
100	-0.96	33.18		100	-0.96	33.18	26.70
140	-0.15	33.54		(150)	0.05	33.63	27.02
Station 4578; July 16; latitude 47°48' N., longitude 50°51' W.; depth 114 meters, dynamic height 971.111							
0	11.49	31.52		0	11.49	31.52	24.00
25	5.23	32.29		25	5.23	32.29	25.62
50	-0.38	32.65		50	-0.38	32.65	26.26
74	-0.88	32.97		75	-0.90	32.97	26.53
99	-0.88	33.14		100	-0.85	33.14	26.66
Station 4579; July 16; latitude 47°44' N., longitude 50°36' W.; depth 150 meters, dynamic height 971.129							
0	11.52	31.65		0	11.52	31.65	24.10
23	8.22	32.14		25	7.70	32.17	25.12
45	2.50	32.39		50	1.50	32.44	25.96
68	0.16	32.74		75	-0.25	32.89	26.43
90	-0.78	33.11		100	-0.80	33.14	26.66
122	-0.79	33.20					
Station 4580; July 16; latitude 47°34' N., longitude 50°16' W.; depth 119 meters, dynamic height 971.115							
0	11.39	31.88		0	11.39	31.88	24.30
25	5.24	32.30		25	5.24	32.30	25.53
51	1.39	32.56		50	1.50	32.56	26.08
76	-0.49	32.92		75	-0.45	32.91	26.46
102	-0.72	33.10		100	-0.70	33.09	26.61
Station 4581; July 16; latitude 47°28.5' N., longitude 49°56' W.; depth 70 meters, dynamic height 971.116							
0	11.88	31.80		0	11.88	31.80	24.15
22	4.85	32.30		25	4.20	32.33	25.67
43	1.95	32.55		(50)	1.40	32.62	26.13
Station 4582; July 16; latitude 47°45.5' N., longitude 49°50' W.; depth 115 meters, dynamic height 971.122							
0	11.67	31.73		0	11.67	31.73	24.13
25	5.59	32.33		25	5.59	32.33	25.52
50	1.01	32.64		50	1.01	32.64	26.18
75	-0.52	32.98		75	-0.52	32.98	26.52
100	-0.95	33.12		100	-0.95	33.12	26.65

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4583; July 16; latitude 48°00' N., longitude 49°44' W.; depth 169 meters, dynamic height 971.110						
0	11.66	31.73	0	11.66	31.73	24.13
23	3.23	32.46	25	2.90	32.53	25.95
46	0.71	32.83	50	0.15	32.84	26.38
69	-1.47	32.86	75	-1.50	32.88	26.47
92	-1.57	32.96	100	-1.55	33.01	26.58
138	-0.86	33.25	150	-0.55	33.32	26.79
Station 4584; July 16; latitude 48°13' N., longitude 49°41' W.; depth 217 meters, dynamic height 971.074						
0	11.53	32.14	0	11.53	32.14	24.48
25	2.15	32.77	25	2.15	32.77	26.20
50	-0.70	32.92	50	-0.70	32.92	26.48
76	-1.47	33.08	75	-1.45	33.08	26.63
101	-1.34	33.23	100	-1.35	33.23	26.75
151	-0.31	33.56	150	-0.35	33.56	26.98
202	0.80	33.92	200	0.75	33.91	27.21
Station 4585; July 16; latitude 48°34' N., longitude 49°32' W.; depth 633 meters, dynamic height 970.923						
0	10.64	32.44	0	10.64	32.44	24.87
24	-0.70	33.52	25	-0.70	33.53	26.97
49	0.79	33.96	50	0.85	33.97	27.25
73	1.73	34.25	75	1.75	34.26	27.42
97	2.10	34.38	100	2.10	34.39	27.49
146	2.52	34.50	150	2.55	34.51	27.56
194	2.80	34.60	200	2.80	34.61	27.61
291	3.07	34.69	300	3.10	34.70	27.66
380	3.43	34.80	400	3.40	34.81	27.72
574	3.45	34.83	600	3.45	34.83	27.72
Station 4586; July 16; latitude 48°42' N., longitude 49°28' W.; depth 1,097 meters, dynamic height 970.946						
0	9.89	32.55	0	9.89	32.55	25.08
23	7.79	32.66	25	7.30	32.73	25.62
47	2.93	34.14	50	2.75	34.16	27.26
70	2.15	34.24	75	2.05	34.25	27.39
94	1.79	34.28	100	1.80	34.29	27.44
140	2.07	34.41	150	2.25	34.46	27.54
187	2.76	34.61	200	2.90	34.65	27.64
281	3.31	34.76	300	3.40	34.78	27.69
345	3.52	34.80	400	3.50	34.82	27.72
526	3.54	34.84	600	3.50	34.85	27.74
712	3.50	34.86	800	3.45	34.86	27.75
907	3.37	34.86	(1,000)	3.35	34.86	27.76
Station 4587; July 17; latitude 49°06' N., longitude 49°20' W.; depth 1,600 meters, dynamic height 970.904						
0	9.11	32.56	0	9.11	32.56	25.21
26	0.69	33.86	25	0.70	33.81	27.13
53	1.56	34.11	50	1.50	34.10	27.31
78	1.68	34.27	75	1.65	34.25	27.42
105	2.10	34.39	100	2.00	34.37	27.49
157	2.83	34.58	150	2.75	34.56	27.58
210	3.07	34.68	200	3.05	34.67	27.69
315	3.39	34.78	300	3.35	34.77	27.73
402	3.53	34.84	400	3.50	34.84	27.73
601	3.44	34.84	600	3.40	34.84	27.74
799	3.37	34.83	800	3.35	34.84	27.74
998	3.32	34.84	1,000	3.30	34.84	27.75
1,496	3.30	34.86				
Station 4588; July 17; latitude 49°34' N., longitude 49°08' W.; depth 1,701 meters, dynamic height 970.880						
0	9.87	32.97	0	9.87	32.97	25.40
25	2.77	34.06	25	2.77	34.06	27.18
51	2.52	34.35	50	2.50	34.34	27.42
76	2.61	34.56	75	2.60	34.54	27.57
102	2.94	34.58	100	2.90	34.57	27.58
152	3.32	34.73	150	3.35	34.73	27.65
204	3.40	34.78	200	3.40	34.78	27.69
306	3.39	34.81	300	3.40	34.81	27.72
386	3.42	34.83	400	3.40	34.83	27.73
578	3.40	34.83	600	3.35	34.83	27.73
770	3.35	34.85	800	3.35	34.85	27.75
966	3.32	34.85	1,000	3.30	34.85	27.76
1,463	3.33	34.86				
Station 4589; July 17; latitude 49°59.5' N., longitude 48°58' W.; depth 1,866 meters, dynamic height 970.862						
0	9.21	33.20	0	9.21	33.20	25.70
24	4.06	34.29	25	4.00	34.30	27.25
49	3.08	34.45	50	3.10	34.46	27.47
73	3.13	34.65	75	3.15	34.66	27.62
98	3.26	34.73	100	3.30	34.73	27.66
147	3.42	34.79	150	3.40	34.79	27.70
195	3.37	34.80	200	3.40	34.80	27.71
293	3.38	34.84	300	3.40	34.84	27.74
370	3.40	34.84	400	3.40	34.84	27.74
557	3.39	34.84	600	3.35	34.84	27.74
747	3.33	34.84	800	3.30	34.84	27.75
938	3.27	34.84	1,000	3.25	34.84	27.75
1,421	3.31	34.86				
Station 4590; July 18; latitude 53°42.5' N., longitude 55°46' W.; depth 100 meters, dynamic height 1,454.957						
0	8.89	27.07	0	8.89	27.07	20.96
23	-1.11	32.14	25	-1.10	32.15	25.87
46	-1.18	32.38	50	-1.20	32.44	26.11
69	-1.34	32.66	75	-1.35	32.68	26.30
78	-1.34	32.69	(100)	-1.30	32.81	26.41
Station 4591; July 19; latitude 53°52' N., longitude 55°28' W.; depth 217 meters, dynamic height 1,454.886						
0	8.17	30.44	0	8.17	30.44	23.70
24	0.40	32.48	25	0.25	32.53	26.13
49	-1.02	32.91	50	-1.05	32.92	26.49
73	-1.18	33.06	75	-1.20	33.07	26.62
98	-1.11	33.18	100	-1.10	33.19	26.71
147	-0.96	33.33	150	-0.95	33.34	26.83
181	-0.68	33.49	(200)	-0.35	33.58	26.99
Station 4592; July 19; latitude 53°57' N., longitude 55°21' W.; depth 169 meters, dynamic height 1,454.890						
0	8.91	30.46	0	8.91	30.46	23.60
25	0.10	32.49	25	0.10	32.49	26.09
49	-1.18	32.76	50	-1.20	32.77	26.38
74	-1.16	32.93	75	-1.15	32.94	26.51
99	-1.18	33.08	100	-1.20	33.09	26.63
148	-0.63	33.52	150	-0.60	33.54	26.97

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4593; July 19; latitude 54°08.5' N., longitude 55°00' W.; depth 165 meters, dynamic height 1,454.887							
0.....	8.74	30.77		0.....	8.74	30.77	23.87
24.....	1.41	32.34		25.....	1.25	32.38	25.95
48.....	-1.07	32.74		50.....	-1.10	32.75	26.35
71.....	-1.17	32.95		75.....	-1.15	32.98	26.54
95.....	-1.16	33.13		100.....	-1.15	33.16	26.69
143.....	-0.62	33.50		150.....	-0.55	33.57	27.00
Station 4594; July 19; latitude 54°19' N., longitude 54°42' W.; depth 180 meters, dynamic height 1,454.855							
0.....	8.00	31.18		0.....	8.00	31.18	24.30
26.....	-0.45	32.68		25.....	-0.35	32.62	26.22
52.....	-1.10	33.05		50.....	-1.10	33.03	26.58
75.....	-0.91	33.27		75.....	-0.95	33.25	26.76
105.....	-0.79	33.41		100.....	-0.80	33.39	26.86
156.....	0.01	33.76		150.....	-0.10	33.72	27.10
Station 4595; July 19; latitude 54°30' N., longitude 54°21' W.; depth 220 meters, dynamic height 1,454.852							
0.....	7.71	31.06		0.....	7.71	31.06	24.24
25.....	-0.79	32.78		25.....	-0.79	32.78	26.38
50.....	-0.96	33.09		50.....	-0.96	33.09	26.62
75.....	-1.09	33.24		75.....	-1.09	33.24	26.75
100.....	-0.89	33.41		100.....	-0.89	33.41	26.89
150.....	-0.23	33.65		150.....	-0.23	33.65	27.05
200.....	1.10	34.09		200.....	1.10	34.09	27.33
Station 4596; July 19; latitude 54°44.5' N., longitude 53°50' W.; depth 320 meters, dynamic height 1,454.834							
0.....	7.42	30.92		0.....	7.42	30.92	24.18
24.....	-1.19	32.86		25.....	-1.20	32.87	26.46
49.....	-1.19	33.07		50.....	-1.20	33.08	26.62
73.....	-1.12	33.25		75.....	-1.10	33.26	26.76
97.....	-0.92	33.38		100.....	-0.85	33.40	26.87
146.....	1.14	33.95		150.....	1.25	33.99	27.24
194.....	2.02	34.29		200.....	2.15	34.32	27.44
291.....	3.23	34.66		300.....	3.30	34.68	27.62
Station 4597; July 19; latitude 54°50.5' N., longitude 53°34' W.; depth 637 meters, dynamic height 1,454.775							
0.....	5.99	31.32		0.....	5.99	31.32	24.67
25.....	0.25	32.64		25.....	0.25	32.64	26.22
50.....	-0.67	33.48		50.....	-0.67	33.48	26.93
75.....	0.49	33.84		75.....	0.49	33.84	27.16
100.....	1.65	34.11		100.....	1.65	34.11	27.81
150.....	2.22	34.37		150.....	2.22	34.37	27.48
200.....	2.96	34.60		200.....	2.96	34.60	27.96
300.....	3.33	34.73		300.....	3.33	34.73	27.65
394.....	3.44	34.745		400.....	3.40	34.75	27.67
592.....	3.51	34.81		600.....	3.50	34.81	27.71
Station 4598; July 19; latitude 54°56' N., longitude 53°18' W.; depth 1,584 meters, dynamic height 1,454.705							
0.....	5.99	31.58		0.....	5.99	31.58	24.88
24.....	7.48	34.06		25.....	7.50	34.11	26.67
47.....	4.22	34.44		50.....	3.95	34.46	27.38
71.....	2.85	34.53		75.....	2.85	34.54	27.55
95.....	2.97	34.58		100.....	3.00	34.59	27.58
142.....	3.22	34.68		150.....	3.25	34.69	27.63
189.....	3.39	34.75		200.....	3.40	34.75	27.67
284.....	3.50	34.79		300.....	3.50	34.79	27.69
340.....	3.54	34.80		400.....	3.50	34.81	27.71
515.....	3.52	34.81		600.....	3.50	34.82	27.72
693.....	3.52	34.82		800.....	3.50	34.84	27.73
878.....	3.49	34.85		1,000.....	3.45	34.85	27.74
1,363.....	3.37	34.84		1,500.....	3.35	34.84	27.74
Station 4599; July 19; latitude 55°01' N., longitude 53°06' W.; depth 2,195 meters, dynamic height 1,454.672							
0.....	7.36	32.44		0.....	7.36	32.44	25.38
25.....	3.56	34.07		25.....	3.56	34.07	27.12
49.....	2.93	34.50		50.....	2.95	34.51	27.52
74.....	3.07	34.65		75.....	3.10	34.65	27.62
99.....	3.24	34.69		100.....	3.25	34.69	27.63
148.....	3.42	34.73		150.....	3.45	34.73	27.64
197.....	3.49	34.78		200.....	3.50	34.78	27.68
296.....	3.49	34.80		300.....	3.50	34.80	27.70
409.....	3.49	34.82		400.....	3.45	34.82	27.72
611.....	3.49	34.83		600.....	3.45	34.83	27.72
813.....	3.46	34.84		800.....	3.45	34.84	27.73
1,014.....	3.33	34.83		1,000.....	3.30	34.83	27.74
1,529.....	3.35	34.86		1,500.....	3.35	34.86	27.76
2,049.....	3.07	34.87		2,000.....	3.10	34.87	27.80
Station 4600; July 19; latitude 55°13' N., longitude 52°44' W.; depth 3,054 meters, dynamic height 1,454.657							
0.....	9.57	34.06		0.....	9.57	34.06	26.31
26.....	6.62	34.39		25.....	6.70	34.39	27.00
52.....	3.30	34.64		50.....	3.30	34.62	27.58
78.....	3.22	34.69		75.....	3.20	34.68	27.63
104.....	3.35	34.72		100.....	3.30	34.72	27.66
155.....	3.56	34.77		150.....	3.55	34.77	27.67
206.....	3.57	34.79		200.....	3.55	34.79	27.68
310.....	3.53	34.81		300.....	3.55	34.81	27.70
389.....	3.50	34.81		400.....	3.50	34.81	27.71
582.....	3.51	34.85		600.....	3.50	34.85	27.74
774.....	3.43	34.84		800.....	3.40	34.84	27.74
965.....	3.32	34.83		1,000.....	3.30	34.83	27.74
1,456.....	3.25	34.84		1,500.....	3.25	34.84	27.75
1,954.....	3.20	34.88		2,000.....	3.10	34.88	27.80
2,386.....	2.79	34.86		2,500.....	2.60	34.85	27.82
2,774.....	2.07	34.83		3,000.....	1.55	34.83	27.89
Station 4601; July 20; latitude 55°36' N., longitude 52°07' W.; depth 3,310 meters, dynamic height 1,454.630							
0.....	9.47	34.55		0.....	9.47	34.55	26.71
24.....	8.17	34.54		25.....	8.00	34.54	26.93
48.....	3.72	34.64		50.....	3.65	34.65	27.56
72.....	3.56	34.70		75.....	3.35	34.71	27.64
96.....	3.32	34.74		100.....	3.35	34.75	27.67
144.....	3.41	34.80		150.....	3.40	34.80	27.71
193.....	3.42	34.82		200.....	3.40	34.82	27.725
289.....	3.46	34.83		300.....	3.45	34.83	27.725
337.....	3.37	34.82		400.....	3.35	34.83	27.73
509.....	3.41	34.85		600.....	3.35	34.84	27.74
682.....	3.34	34.84		800.....	3.30	34.85	27.76
859.....	3.32	34.85		1,000.....	3.30	34.85	27.76
1,318.....	3.23	34.84		1,500.....	3.25	34.85	27.76
1,796.....	3.32	34.86		2,000.....	3.30	34.87	27.78
2,605.....	2.92	34.88		2,500.....	3.05	34.88	27.80
3,056.....	2.02	34.89		3,000.....	2.15	34.89	27.89

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰	Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4602; July 20; latitude 56°03' N., longitude 51°24' W.; depth 3,475 meters, dynamic height 1,454.648							Station 4605; July 21; latitude 57°44.5' N., longitude 48°14' W.; depth 3,365 meters, dynamic height 1,454.616						
0.....	9.72	34.39	0.....	9.72	34.39	26.54	0.....	9.00	34.59	0.....	9.00	34.59	26.81
25.....	7.03	34.41	25.....	7.03	34.41	26.97	23.....	8.53	34.59	25.....	8.05	34.59	26.96
50.....	4.42	34.57	50.....	4.42	34.57	27.43	46.....	3.86	34.69	50.....	3.85	34.70	27.58
75.....	4.00	34.66	75.....	4.00	34.66	27.54	69.....	3.89	34.76	75.....	3.90	34.77	27.64
101.....	3.72	34.69	100.....	3.70	34.69	27.59	93.....	3.82	34.78	100.....	3.80	34.79	27.66
150.....	3.52	34.72	150.....	3.52	34.72	27.64	138.....	3.74	34.83	150.....	3.75	34.84	27.70
200.....	3.49	34.78	200.....	3.49	34.78	27.68	184.....	3.79	34.86	200.....	3.80	34.86	27.72
301.....	3.48	34.81	300.....	3.50	34.81	27.71	277.....	3.66	34.86	300.....	3.65	34.86	27.73
361.....	3.48	34.84	400.....	3.45	34.84	27.73	391.....	3.61	34.88	400.....	3.65	34.88	27.74
544.....	3.31	34.84	600.....	3.30	34.84	27.75	584.....	3.48	34.87	600.....	3.45	34.87	27.76
727.....	3.31	34.85	800.....	3.30	34.84	27.75	777.....	3.31	34.855	800.....	3.30	34.86	27.77
913.....	3.26	34.84	1,000.....	3.25	34.84	27.75	968.....	3.24	34.85	1,000.....	3.20	34.85	27.77
1,389.....	3.25	34.85	1,500.....	3.25	34.86	27.77	1,507.....	3.23	34.85	1,500.....	3.20	34.85	27.77
1,877.....	3.33	34.88	2,000.....	3.35	34.88	27.77	2,079.....	3.18	34.91	2,000.....	3.20	34.91	27.82
2,514.....	3.10	34.89	2,500.....	3.10	34.89	27.81	2,361.....	2.96	34.90	2,500.....	2.85	34.90	27.84
3,015.....	2.67	34.90	3,000.....	2.70	34.90	27.85	2,912.....	2.43	34.89	3,000.....	2.35	34.88	27.86
3,417.....	1.79	34.86					3,202.....	2.01	34.87				
Station 4603; July 20; latitude 56°36.5' N., longitude 50°30' W.; depth 3,841 meters, dynamic height 1,454.635							Station 4606; July 21-22; latitude 58°16' N., longitude 46°54' W.; depth 2,980 meters, dynamic height 1,454.632						
0.....	9.57	34.50	0.....	9.57	34.50	26.65	0.....	8.34	34.52	0.....	8.34	34.52	26.87
25.....	8.88	34.55	25.....	8.88	34.55	26.80	28.....	7.04	34.65	25.....	7.25	34.64	27.12
49.....	8.85	34.64	50.....	8.80	34.64	27.54	55.....	3.99	34.74	50.....	4.40	34.72	27.54
74.....	3.53	34.72	75.....	3.50	34.72	27.64	84.....	3.76	34.76	75.....	3.80	34.76	27.64
98.....	3.43	34.76	100.....	3.40	34.76	27.68	111.....	3.91	34.82	100.....	3.85	34.80	27.66
147.....	3.34	34.78	150.....	3.35	34.78	27.69	167.....	3.84	34.85	150.....	3.85	34.84	27.69
197.....	3.31	34.81	200.....	3.30	34.81	27.73	223.....	3.88	34.88	200.....	3.85	34.87	27.72
295.....	3.29	34.82	300.....	3.30	34.82	27.74	334.....	3.75	34.88	300.....	3.80	34.88	27.73
351.....	3.33	34.82	400.....	3.30	34.82	27.74	437.....	3.67	34.88	400.....	3.70	34.88	27.74
532.....	3.27	34.83	600.....	3.25	34.82	27.74	508.....	3.72	34.88	600.....	3.55	34.86	27.74
716.....	3.23	34.82	800.....	3.20	34.82	27.75	556.....	3.60	34.865	800.....	3.45	34.86	27.75
905.....	3.22	34.83	1,000.....	3.20	34.83	27.75	941.....	3.40	34.855	1,000.....	3.35	34.85	27.75
1,385.....	3.24	34.84	1,500.....	3.25	34.85	27.76	1,438.....	3.30	34.85	1,500.....	3.30	34.85	27.76
1,885.....	3.34	34.88	2,000.....	3.25	34.88	27.78	1,888.....	3.31	34.90	2,000.....	3.30	34.90	27.80
2,596.....	3.04	34.90	2,500.....	3.10	34.90	27.82	2,375.....	2.87	34.90	2,500.....	2.65	34.90	27.86
3,103.....	2.67	34.90	3,000.....	2.80	34.90	27.84	2,768.....	2.15	34.88				
3,608.....	1.62	34.86	3,500.....	1.85	34.87	27.90							
Station 4604; July 21; latitude 57°10' N., longitude 49°25' W.; depth 3,530 meters, dynamic height 1,454.664							Station 4607; July 22; latitude 58°40' N., longitude 46°01' W.; depth 2,550 meters, dynamic height 1,454.627						
0.....	9.69	34.56	0.....	9.69	34.56	26.68	0.....	8.18	34.70	0.....	8.18	34.70	27.03
23.....	8.36	34.56	25.....	8.10	34.56	26.93	24.....	8.15	34.72	25.....	8.15	34.72	27.05
47.....	4.56	34.57	50.....	4.40	34.57	27.43	49.....	5.90	34.82	50.....	5.80	34.82	27.46
71.....	3.78	34.60	75.....	3.70	34.61	27.53	73.....	4.63	34.84	75.....	4.55	34.84	27.62
95.....	3.55	34.66	100.....	3.50	34.67	27.60	99.....	4.30	34.87	100.....	4.30	34.87	27.67
142.....	3.38	34.75	150.....	3.35	34.76	27.60	147.....	4.25	34.90	150.....	4.25	34.90	27.70
189.....	3.32	34.79	200.....	3.30	34.79	27.71	196.....	4.13	34.90	200.....	4.15	34.90	27.71
284.....	3.30	34.80	300.....	3.30	34.80	27.72	295.....	4.09	34.91	300.....	4.10	34.91	27.73
350.....	3.30	34.83	400.....	3.30	34.81	27.73	403.....	4.02	34.92	400.....	4.00	34.92	27.75
528.....	3.28	34.82	600.....	3.25	34.81	27.73	606.....	3.60	34.88	600.....	3.60	34.88	27.75
711.....	3.26	34.82	800.....	3.25	34.81	27.73	810.....	3.37	34.84	800.....	3.35	34.85	27.75
895.....	3.24	34.80	1,000.....	3.20	34.80	27.73	1,011.....	3.29	34.84	1,000.....	3.30	34.84	27.75
1,349.....	3.25	34.81	1,500.....	3.25	34.81	27.73	1,516.....	3.37	34.89	1,500.....	3.40	34.89	27.78
2,580.....	3.07	34.885	2,000.....	3.30	34.83	27.74	2,102.....	2.68	34.87	2,000.....	2.90	34.87	27.82
3,091.....	2.66	34.875	2,500.....	3.15	34.88	27.79	2,459.....	2.02	34.86	(2,500).....	1.90	34.86	27.89
3,284.....	2.36	34.875	3,000.....	2.75	34.88	27.83							
			(3,500).....	1.90	34.87	27.90							

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1951—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t	Depth, meters	Temperature °C.	Salinity ‰		Depth, meters	Temperature °C.	Salinity ‰	σ_t
Station 4608; July 22; latitude 58°57.5' N., longitude 45°20' W.; depth 2,469 meters, dynamic height 1,454.647								Station 4610; July 22; latitude 59°25' N., longitude 44°49' W.; depth 1,097 meters, dynamic height 1,454.733							
0.....	7.36	34.74		0.....	7.36	34.74	27.18	0.....	3.65	32.67		0.....	3.65	32.67	25.99
28.....	6.98	34.76		25.....	7.10	34.75	27.23	26.....	2.76	33.01		25.....	2.75	32.97	26.31
57.....	5.06	34.89		50.....	5.15	34.85	27.56	51.....	3.28	34.46		50.....	3.20	34.40	27.41
85.....	4.91	34.95		75.....	4.95	34.93	27.64	78.....	4.18	34.63		75.....	4.10	34.61	27.49
114.....	4.79	34.945		100.....	4.85	34.95	27.67	103.....	4.79	34.80		100.....	4.75	34.79	27.56
171.....	4.62	34.93		150.....	4.65	34.94	27.69	155.....	4.95	34.86		150.....	4.95	34.86	27.59
228.....	4.61	34.94		200.....	4.60	34.94	27.69	206.....	5.08	34.94		200.....	5.10	34.94	27.63
342.....	4.53	34.94		300.....	4.55	34.94	27.70	309.....	4.81	34.95		300.....	4.80	34.94	27.67
392.....	4.48	34.935		400.....	4.45	34.93	27.70	282.....	4.75	34.92		400.....	4.75	34.95	27.68
591.....	4.18	34.92		600.....	4.15	34.92	27.73	442.....	4.69	34.96		600.....	4.40	34.94	27.71
793.....	3.90	34.89		800.....	3.85	34.89	27.73	616.....	4.35	34.94		(800).....	4.25	34.92	27.72
998.....	3.64	34.88		1,000.....	3.65	34.88	27.74	Station 4611; July 23; latitude 59°32.5' N., longitude 44°26' W.; depth 338 meters, dynamic height 1,454.789							
1,510.....	3.36	34.89		1,500.....	3.35	34.89	27.78	0.....	1.30	32.38		0.....	1.30	32.38	25.95
1,863.....	3.00	34.89		2,000.....	2.75	34.88	27.83	24.....	-0.20	32.81		25.....	-0.30	32.83	26.39
2,249.....	2.22	34.85						50.....	-1.07	33.35		50.....	-1.05	33.35	26.84
Station 4609; July 22; latitude 59°13' N., longitude 44°51' W.; depth 1,920 meters, dynamic height 1,454.663								74.....	-0.63	33.66		75.....	-0.60	33.67	27.08
0.....	6.18	33.70		0.....	6.18	33.70	26.52	99.....	1.49	34.11		100.....	1.50	34.12	27.33
23.....	5.44	34.83		25.....	5.40	34.84	27.52	148.....	1.92	34.24		150.....	1.95	34.24	27.39
46.....	5.37	34.92		50.....	5.35	34.93	27.59	198.....	2.11	34.29		200.....	2.10	34.29	27.41
69.....	5.35	34.96		75.....	5.25	34.96	27.64	(300).....				(300).....	2.20	34.36	27.47
92.....	4.86	34.92		100.....	4.85	34.93	27.65	Station 4612; July 23; latitude 59°37' N., longitude 44°17' W.; depth 174 meters, dynamic height 1,454.833							
137.....	4.86	34.96		150.....	4.80	34.96	27.69	0.....	2.55	32.01		0.....	2.55	32.01	25.56
184.....	4.73	34.94		200.....	4.70	34.95	27.69	27.....	0.69	32.44		25.....	0.75	32.37	25.97
276.....	4.66	34.96		300.....	4.65	34.95	27.70	54.....	-0.95	33.14		50.....	-0.75	33.04	26.58
296.....	4.68	34.95		400.....	4.60	34.95	27.70	80.....	-1.23	33.42		75.....	-1.20	33.38	26.87
460.....	4.62	34.94		600.....	4.55	34.95	27.71	107.....	-0.98	33.50		100.....	-1.05	33.47	26.94
636.....	4.53	34.95		800.....	4.30	34.93	27.71	160.....	1.61	34.14		150.....	1.05	34.02	27.28
823.....	4.27	34.93		1,000.....	3.95	34.90	27.73	Station 4613; July 23; latitude 59°43.5' N., longitude 43°58' W.; depth 143 meters, dynamic height 1,454.907							
1,299.....	3.53	34.87		1,500.....	3.35	34.90	27.79	0.....	1.37	30.98		0.....	1.37	30.98	24.82
1,593.....	3.33	34.91						24.....	1.36.....	31.01		25.....	1.35	31.07	24.89
								48.....	-0.24	32.58		50.....	-0.30	32.65	26.24
								73.....	-0.73	32.92		75.....	-0.75	32.93	26.49
								97.....	-0.89	33.01		100.....	-0.85	33.06	26.59
								121.....	-0.62	33.39					

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BULLETIN No. 38

INTERNATIONAL ICE OBSERVATION
AND ICE PATROL SERVICE IN THE
NORTH ATLANTIC OCEAN - [^{SEASON of} 1952]

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U. S. TREASURY DEPARTMENT
COAST GUARD

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INTERNATIONAL
ICE OBSERVATION AND ICE PATROL
SERVICE

IN THE
NORTH ATLANTIC OCEAN



P. S. BRANSON
FLOYD M. SOULE



CG-188-7

Season of 1952

UNITED STATES
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UNITED STATES COAST GUARD



WASHINGTON, D. C., 5 May 1953.

Transmitted herewith is Bulletin No. 38, International Ice Observation and Ice Patrol Service in the North Atlantic Ocean—Season of 1952.

A handwritten signature in cursive script, reading 'Merlin O'Neill', is positioned above the typed name.

MERLIN O'NEILL,
Vice Admiral, U. S. Coast Guard
Commandant

Dist. (SDL No. 53)

A: a aa b c dd e f (SORREL, LAUREL, COWSLIP, EVERGREEN,
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C: a b c (1)

D: h (5); c e (1)

E: d (5)

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FOREWORD

This is Bulletin No. 38 in a series of bulletins which describe the work of the International Service of Ice Observation and Ice Patrol in the North Atlantic Ocean. This report relates the details of the 1952 ice season.

Under the authority of the United States Law and the International Convention for the Safety of Life at Sea, the United States Coast Guard conducts "International Ice Observation and Ice Patrol Service in the North Atlantic Ocean." The primary objective of this service is to determine the location of ice formations that are or may be a menace to ocean navigation and to disseminate this information to all commercial shipping and interested agencies. The ice formations are located by utilizing the forces assigned and by receiving reports from merchant vessels and commercial and military aircraft. The term "Ice Patrol" is used to describe the activities of the planes and ships when the threat to shipping requires a continuous guarding of the limits of the ice encumbered region by a surface vessel. The term "ice observation" is used to describe the operation when ice conditions are such as to require only intermittent observation by vessels or aircraft, primarily the latter.

In order to further the primary objective of this service, oceanographic surveys of the ice areas are made each spring. The current charts and other information so evolved make possible the prediction of the movement of ice, thus materially adding to the efficiency of the patrol services. In addition, oceanographic surveys of the Labrador Sea and Davis Strait areas are usually made during July of each year, adding further knowledge of the factors involved in the production and transportation of ice to the areas heavily traveled by shipping.

The icebergs which hinder the navigator in the North Atlantic are produced mainly by the glaciers of northwestern Greenland. These bergs are carried southward by the Baffinland and Labrador Currents, and some eventually reach the Tail of the Grand Banks, where the Labrador Current and Gulf Stream meet. This is the area of greatest danger to mariners since most of the transatlantic shipping lanes pass through this region.

Author of the section of this bulletin dealing with oceanography was U. S. Coast Guard Oceanographer Floyd M. Soule. Other sections of the report were done by Lt. P. S. Branson, United States Coast Guard.

INTERNATIONAL ICE PATROL, 1952

During that part of each year when ice presents a danger to the North Atlantic shipping lanes, usually from February until July, the headquarters for International Ice Patrol is maintained at the United States Naval Station, Argentia, Newfoundland. From this vantage point, with its proximity to the Grand Banks area, the commander, International Ice Patrol directs the movement of the ships and aircraft under his command. United States Coast Guard radio station (NIK), also located at Argentia, which is controlled by commander, International Ice Patrol, is used for collecting ice and weather reports, and for broadcasting ice information bulletins to mariners.

Forces assigned to Ice Patrol consisted of two PB1G (B17) aircraft, used for aerial ice observation; the U. S. C. G. cutter *Evergreen*, specially fitted out and used for oceanographic survey work; and two larger patrol cutters, the *Acushnet* and *Androskoggin*.

Capt. G. Van A. Graves, USCG was Commander, International Ice Patrol during 1952. The first assistant, or Ice Patrol Officer was Lt. P. S. Branson, USCG. Preseason ice reconnaissance flights by the United States Coast Guard Air Detachment, Argentia, during early February indicated that the normal movement of ice was well started, and consequently an advance Ice Patrol skeleton staff opened the Ice Patrol Office at Argentia on 13 February 1952 and commenced ice observation flights with one PB1G aircraft on 16 February. On 27 February, Commander, International Ice Patrol arrived with the remainder of his staff, and on 5 March radio station NIK was opened. Commencing on 5 March, reports of ice conditions were made twice daily to the United States Hydrographic Office, Washington, D. C. Because of the fact that the ice did not continue its expected southward movement during March and the first part of April, ice broadcasts to shipping were not begun until 30 April, at which time the ice had assumed a position of potential danger. These broadcasts were continued until the end of the season, on 16 June.

During the early part of the season no ice threatened any of the North Atlantic Track Agreement Tracks then in effect, so on 19 March, the Commander, International Ice Patrol recommended to the North Atlantic Track Agreement representative that an immediate shift be made to track F, and that the scheduled shift from track C to B on 11 April not be made. This recommendation was acknowledged with thanks, but was not acted upon.

During much of the season only one aircraft was required at Argentina and the second plane remained at its base in the United States. The U. S. C. G. cutters *Acushnet* and *Androscoggin* were assigned for surface patrol duty but due to the scarcity of ice their services were not required, and both ships remained at their home ports. A material reduction in the cost of Ice Patrol was effected through these measures.

Three oceanographic surveys were made by the C. G. cutter *Evergreen*. During each cruise a current chart was completed while the vessel was still at sea. If patrol cutters were being used, a copy of this chart would be passed to the cutter at sea for use in determining the probable drift of bergs. Such charts are used at the Ice Patrol Office at Argentina for planning ice observation flights and predicting future movements of ice. Details of the oceanographic program are discussed in another section of this bulletin. In general however, surveys during April and May revealed that the Labrador Current was not dividing as usual near the northern slope of the Grand Banks, with the western branch running south along the east coast of the Avalon Peninsula. Instead, practically all the current was being diverted to the eastern branch running south along the eastern slope of the banks. This meant that bergs close inshore along the Avalon Peninsula had little driving force to move them south. During the latter part of April and the first part of May, however, bergs driven offshore by the westerly winds were in a position to move south with the eastern branch of the Labrador Current. A survey completed on 16 June showed fairly normal speed but revealed that practically all of the Labrador Current recurved to the east and northeast, north of the 44th parallel, leaving little likelihood of any berg drifting south of that latitude.

Surface water temperatures collected by radio from vessels passing through the ice areas were another aid in establishing and predicting ice drift and melting rates. Using these temperatures collected over each 2-week period, an oceanographically trained officer on the staff of Commander, International Ice Patrol at Argentina, constructed a surface isotherm chart of sea temperatures. This chart indicated the general features of the Labrador and Atlantic Currents, and the important area where they meet near the Tail of the Grand Banks. Although this type of chart did not give specific values of the velocity of the currents, it did indicate general direction and relative strength, both useful aids in forecasting the drift of ice. Isotherm charts for the 1952 season are shown in figures 1 to 6, inclusive.

A record of the number of icebergs drifting south of the 48th parallel each year is kept by the Ice Patrol and is used as a yardstick to measure the relative severity of each ice season. Data for the past 50 years show that an annual average of 431 bergs cross 48° north latitude. Naturally the annual cost of Ice Patrol cannot be made

exactly proportional to the berg count, but every effort is being made to keep the cost consistent with the danger to shipping. During 1952 only 14 bergs were estimated to have drifted past the 48th parallel, and none past the 47th. From this figure, and by comparison with average ice limits shown in The Ice Atlas of the Northern Hemisphere, Hydrographic Office Publication No. 550, it can be seen that 1952 was a very light ice year. Details of the ice movement for each month of the year are given under Ice Conditions, 1952. (See figs. 1 to 4.)

AERIAL ICE OBSERVATION

During 1952 the entire program of ice observation was carried out with two PB1G (B17) aircraft, capable of flying 1,500 miles on a normal patrol. These planes were equipped with two loran indicators, both manned at all times during flight by trained operators who acted as aides to the navigator. With positions being obtained approximately every 3 minutes, it was possible to accurately fix the location of every ice formation sighted. An experienced ice observer was carried on each flight, and seated in a position to have unrestricted visibility from beam to beam. A continuous radar watch was maintained, even during periods of good visibility, and as a further aid to the observer, a remote radar oscilloscope was mounted for his use.

To ensure that ice formations were not missed while searching under normal conditions, the tracks followed by the aircraft were planned to be parallel and 25 miles apart. With flights planned in this manner, the average search was believed to cover effectively a sea surface area of 30,000 to 35,000 square miles. During 1952, ice conditions were never severe enough to justify aerial searches during marginal weather. On several occasions fog or low stratus developed during a flight and forced completion of the search by radar alone. When this occurred, it was sometimes possible to identify radar targets by passing over them at altitudes from 300 to 500 feet.

Flight statistics for the season are given in the following table.

Month	Number of flights	Hours minimum flight time	Hours maximum flight time	Hours average flight time	Total flight time hours	Minimum flight distance	Maximum flight distance	Average flight distance	Total flight distance	Total square miles searched	Maximum days between flights	Average number days between flights
13-29 Feb...	4	5.7	8.5	7.4	29.4	798	1,245	1,073	4,293	94,750	6	4
March.....	11	4.1	9.6	7.2	79.7	411	1,390	945	10,396	240,550	11	2.9
April.....	12	1.6	9.7	6.7	80.7	240	1,420	968	11,610	252,250	3	2.5
May.....	9	4.1	9.7	7.0	63.4	640	1,500	1,054	9,485	181,900	10	3.3
1-15 June...	3	8.0	8.8	8.4	25.3	1,200	1,435	1,318	3,955	95,000	6	5
Total for season.	39	-----	-----	-----	278.5	-----	-----	-----	39,739	864,450	-----	3.1

COMMUNICATIONS

One of the major elements of the Ice Patrol force at Argentia was Coast Guard Radio Station NIK. Here the merchant vessel reports of ice, weather, and sea temperatures were received, and ice bulletins to shipping were broadcast twice daily. In addition, teletype connections were maintained with the various major communication centers along the Atlantic seaboard as a further aid in gathering ice information from other sources such as military and commercial transatlantic aircraft. This teletype service was also used to transmit ice information to the United States Hydrographic Office, Washington, D. C., where it was broadcast to shipping in the form of Hydrolants and daily published Hydrographic Bulletins.

Besides acting primarily as an ice collection and warning agency, radio station NIK was alert to receive and handle distress messages and render all possible assistance. Medical advice was available from NIK through the cooperation of the medical officer, United States Naval Station, Argentina.

The value of Ice Patrol services is largely dependent on the efficiency of its communication organization. It is a constant aim to keep the Ice Patrol communication system at peak performance. Suggestions or criticisms from mariners are always welcome, and should be addressed to the Commandant, United States Coast Guard, Washington 25, D. C. In 1952, it was noted that only a very small percentage of ships crossing the ice patrol area actually made radio contact with NIK. Mariners perhaps fail to realize that the reports every four hours of weather and surface sea temperature requested by NIK may be of great value in predicting the future movement of ice, even though the ship's position may be far removed from known ice areas.

In 1952, radio station NIK commenced twice daily reports to the United States Hydrographic Office on March 5, and the broadcast of the twice daily ice bulletins to shipping began on April 30. Both schedules were maintained until the termination of the ice season on June 16. The ice bulletins to shipping were broadcast simultaneously on frequencies 155, 5320 and 8245 kilocycles at 0048 G. C. T. and 1248 G. C. T. daily. The silent periods were observed. The broadcast was keyed automatically at 15 words per minute and repeated at 25 words per minute. Each broadcast listed the most recently sighted or reported ice first and the distinction was made between ice "sighted" and ice "reported." Ice "sighted" is that seen by Ice Patrol aircraft or cutters and ice "reported" is that seen and reported by all other sources. Each broadcast was concluded with a request that all shipping in the area report ice, weather and sea temperatures to NIK. Three frequencies were available to merchant ships for making these reports, 468, 480, and 8250 kilocycles. Either of the first two could be used after calling on 500 kilocycles, and the last was used if calling was done on 8280 kilocycles.

During the 1952 season NIK sent or received 3,210 radio messages and 12,770 landline messages. A tabulation of reports received for the entire season is as follows:

Total number of ships sending reports.....	302
Number of ice reports.....	118
Total number of ships sending ice reports.....	60
Number of water temperatures.....	2, 285
Total number of ships sending water temperatures.....	214
Total number of ships requesting special reports.....	84
Total number of weather reports relayed to observer, Washington.....	50

Thirty-seven percent of the reports received came from United States vessels, and 25 percent from British vessels, with the remaining 38 percent divided between 19 other nationalities.

ICE CONDITIONS 1952

JANUARY

The first ice report for the 1952 season was received from the United States Coast Guard Air Detachment, Argentia, Newfoundland. On 17 January, during a routine flight from Argentia to Battle Harbor, Labrador, pack ice was sighted on either side of the track. On 21 January the U. S. C. G. Cutter *Matagorda* reported running through drift ice and open pack between 52°00' N. and 53°00' N. at 53°00' W. On 30 January another flight from the Coast Guard Air Detachment, Argentia, to Battle Harbor, patrolled to the east of their normal track and observed the southern and eastern limits of the pack ice to extend on an approximate line from Cape Freels, Newfoundland, to 50°00' N., 52°00' W., and thence northerly. On this flight nine bergs and two growlers were sighted between 51°00' N., and 52°20' N., from the mainland of Newfoundland east to 52°00' W. On 31 January, at the request of Commander, International Ice Patrol, the Coast Guard Air Detachment, Argentia, made a preseason aerial reconnaissance flight over the central and northern portion of the Grand Banks and found scattered drift ice along an irregular line from 50°00' N., 52°00' W., to 49°03' N., 51°45' W., and thence westerly.

No known icebergs came south of 48°00' N. during January. Limits of pack ice for the month appear to be about average as compared with those limits shown in the Ice Atlas of the Northern Hemisphere.

FEBRUARY

On the 1st day of the month a PBY from the Coast Guard Air Detachment, Argentia, made another preseason ice reconnaissance flight covering the southeastern and eastern slopes of the Grand Banks and found no ice. On February 8, the U. S. C. G. Cutter *Absecon* reported running through fields of open and close pack ice along a line extending approximately from 50°00' N., 51°00' W.,

to 53°10' N., 50°38' W., with three bergs within a 10-mile radius of 53°10' N., 50°40' W. On February 11, the Coast Guard Air Detachment, Argentia, scouted the northern slopes of the Grand Banks and determined that the southern limit of the pack ice was defined by an irregular line running from Cape Bonavista, Newfoundland, to 51°20' N., 50°20' W. Two bergs were also sighted on this flight, one at 51°45' N., 51°49' W., and the other at 51°53' N., 51°02' W.

The first flights by a regularly assigned International Ice Patrol plane were made on February 16 and 17, and covered the area from Newfoundland east to 45°00' W., between 47°00' N., and 49°00' N. No ice was sighted on either of these flights. Two more flights by Ice Patrol aircraft were made on February 24 and 25, covering the area between 48°00' N., and 51°00' N., from 48°00' W., to Newfoundland. The latter of these two flights determined that the southern limit of pack ice ran from Cape Bonavista, Newfoundland, to 49°00' N., 52°00' W., and thence northerly, with ice grading from open pack to consolidated pack about 30 miles to the west of this line. A total of eight bergs and six growlers were sighted on these two flights between 49°00' N., and 51°30' N., west of 52°00' W. Four bergs and one growler were sighted within a 20-mile radius to the eastward of Cape Bonavista, Newfoundland. The southernmost piece of ice sighted on either of these flights was a very small growler at 48°20' N., 51°56' W.

On February 26 the S. S. *Finn Trader* reported three growlers at 48°16' N., 50°16' W. This later turned out to be the most southerly ice reporting of the month. Two more bergs were reported on the 27th and 28th of the month, the first by the U. S. C. G. cutter *Barataria* at 48°46' N., 50°59' W., and the second by the U. S. C. G. cutter *McCulloch* at 49°00' N., 50°52' W.

On February 28, an International Ice Patrol plane en route from Halifax, Nova Scotia, to Argentia scouted the Cabot Strait area and reported the results directly to the Canadian Department of Transport. On a course from Scatari Island to St. Paul Island and thence to Argentia no ice was sighted except close inshore at St. Ann Bay.

Four flights by regularly assigned International Ice Patrol aircraft were made during the month, in addition to the scouting done while en route over the Cabot Strait area. No known icebergs drifted south of 48°00' N. during the month. Limits of pack ice and berg ice were less than the average limits shown in the Ice Atlas of the Northern Hemisphere. Distribution of ice is shown in figure 1.

MARCH

Flights on the 1st of March and the 5th, 6th, and 7th, covering the area from 47°00' N., to 52°00' N., between 46°00' W., and the east

coast of Newfoundland revealed that most of the ice found in the last week of February had either melted or been blown on shore by winds coming from the easterly quadrants during this period. A light string of slush was found near 47°42' N., 51°20' W., and two bergs in the vicinity of Cape Bonavista, Newfoundland, one aground on the beach. Otherwise all ice was north of 49°00' N. The eastern limit of close pack ice was defined by a line running approximately from Fogo Island to Cape Bauld, Newfoundland, to a point 10 miles east of Belle Isle and thence north, with loose strings of drift ice extending 40 miles east of this line. About 11 bergs were observed in the pack at the eastern entrance to the Strait of Belle Isle.

Six aerial surveys were made between the 19th of March and the end of the month, covering the east coast of Newfoundland and the area from 50°00' N., to 54°30' N., over the Labrador Current. The ice conditions in the Newfoundland area were found to be much the same as determined earlier in the month, with the exception that numerous bergs and growlers were detected in the pack ice between Fogo Island and Cape Bauld, Newfoundland. Along the Labrador coast the outer limit of open and close pack extended in a line from 10 miles east of Belle Isle almost due north to 54°00' N., and thence in a north-northwesterly direction, with floes and strings of ice extending 50 miles east of this line. To the east of the outer limit of pack ice, near 54°00' N., 54°30' W., in a position which could possibly present a later threat, several bergs and growlers were found in the Labrador Current.

On March 28 a MATS plane reported sighting an iceberg at 46°25' N., 50°20' W., a position very near the Virgin Rocks, a shoal area with depths of 3 fathoms, and well south of any known ice. An Ice Patrol plane went out and thoroughly searched the area, the same day, but found no ice in the vicinity.

On March 10, the Canadian Department of Transport began intermittent aerial surveys of the Gulf of St. Lawrence region and reported that ice conditions were much better than average and compared favorably with 1951, which had been an exceptionally light ice year. In general, drift ice was being discharged from the St. Lawrence River between Anticosti Island and the Gaspé Peninsula. The Strait of Canso, Northumberland Strait, and the west coast of Cape Breton Island were filled with close pack ice. A narrow strip of close pack also extended along the northeast coast of Cape Breton Island.

By the end of the month open pack and strings of drift ice extending from Cape Breton to a northwest-southeast line running approximately from Bird Rocks to St. Paul Island to 47°10' N., 59°00' W., had partially blocked Cabot Strait. North of this line, however, only occasional strings of drift ice caused any interference to navigators entering the strait. Conditions in Northumberland Strait and the

Strait of Canso remained much the same during the month. Drift ice on the east coast of Cape Breton came as far south as Scatari Island.

Eleven aerial surveys were made by Ice Patrol aircraft during March. No known icebergs drifted south of $48^{\circ}00'$ N. during the month. Limits of pack and berg ice were much less than the average limits shown in the Ice Atlas of the Northern Hemisphere. Distribution of ice is shown in figure 1.

APRIL

Five surveys by Ice Patrol aircraft between the 1st and 15th of April established the fact that the pack ice found in the large embayment between Cape Freels and Cape Bauld, Newfoundland, was definitely moving eastward into deeper water as it loosened and broke up with the warmer weather. By the 10th of the month the outer limit of the pack extended approximately northeast from Cape Freels, Newfoundland, to $50^{\circ}00'$ N., $52^{\circ}40'$ W., and thence west-northwest.

From the 13th until the end of the month, westerly winds prevailed over the entire Newfoundland area and accelerated the movement of ice offshore. Aerial surveys on the 14th, 15th, 17th, 19th, and 22d, showed that the pack was rapidly moving eastward under the influence of these westerly winds, and that there were many small bergs and growlers in this ice, probably those which had been noted during March in the Notre Dame Bay area. By April 22, the outer limit of pack and drift ice extended approximately from Baccalieu Island to $49^{\circ}10'$ N., $50^{\circ}20'$ W., thence northwest.

During the remainder of April four more aerial surveys were made, on the 25th, 26th, 28th, and 29th. By the end of the month the southern and eastern limits of all ice extended approximately from Cape St. Francis, Newfoundland, to $47^{\circ}40'$ N., $47^{\circ}00'$ W., to $50^{\circ}30'$ N., $52^{\circ}00'$ W., to $52^{\circ}00'$ N., $52^{\circ}00'$ W., thence northwest. Many bergs and growlers lay within the area enclosed by this boundary line. Near the vicinity of $48^{\circ}00'$ N., $48^{\circ}00'$ W., 3 bergs and about 15 growlers were sighted, all in a position to move rapidly southward with the Labrador Current which was known to be running strongly near this locality from an oceanographic survey performed during the first 3 weeks of the month. The most southerly ice formation sighted during the month, and the most dangerous to shipping, was a small berg sighted on the 29th at $47^{\circ}45'$ N., $47^{\circ}59'$ W. About 8 bergs and 20 growlers were sighted near a line from $47^{\circ}50'$ N., $50^{\circ}30'$ W., to Cape St. Francis, but were not considered in a favorable position to move far south, as it was known from the oceanographic survey that the Labrador Current was very weak and variable along the coast of the Avalon Peninsula.

Within the boundaries of the ice described above, south of 50°00' N., and east of 52°00' W., the pack consisted of drift ice and open pack, grading to close and consolidated pack west of 52°00' W. North of 50°00' N., the ice graded from drift ice east of 54°00' W., to open and close pack west of 54°00' W.

During the month several flights were also made along the Labrador coast between Belle Isle and Hamilton Inlet to determine the potential supply of ice to the areas traversed by shipping further south. On the 9th and 10th of April, the outer limit of Labrador ice was found to run in a line from Belle Isle to 54°20' N., 53°40' W., to 56°00' N., 56°20' W., with many bergs and growlers in the ice. The flight on the 10th also covered the area near ocean station B at 56°30' N., 51°00' W., to determine if there were any readily apparent explanation for the numerous bergs reported in this locality. On April 14, another flight along the Labrador coast revealed that the pack ice in this vicinity was also moving east, and that the outer limits were defined by a line from Belle Isle east to 55°00' W., to 52°20' N., 53°40' W., to 53°40' N., 53°30' W., to 54°50' N., 54°30' W., to 55°05' N., 56°50' W., thence north-northwest. Many bergs and growlers were also found within the limits of this ice.

On April 1 the Canadian Department of Transport began daily aerial surveys, weather permitting, of the Cabot Strait and Gulf of St. Lawrence area. On the 7th, the St. Lawrence River was reported navigable to Quebec, and by the 14th, navigable to Montreal. By the 17th of the month the ice in Cabot Strait had drifted to its maximum easterly extension, under the influence of the westerly winds. On this date open pack and drift ice extended from Cape Breton to a line from St. Paul Island to 46°20' N., 57°40' W., to 45°35' N., 57°40' W., to 45°20' N., 58°30' W. Some scattered drift ice was also reported between St. Paul Island and Cape Ray, but did not prevent passage through this area. By the end of the month most of this ice had disappeared, leaving only isolated patches off the east coast of Cape Breton. Routes via the Strait of Canso and Northumberland Strait were reported clearing, but not recommended as yet for navigation.

During March and April numerous bergs were reported in the vicinity of ocean station B at 56°30' N., 51°00' W., by Coast Guard cutters occupying the station. At the request of Commander, International Ice Patrol, several of these bergs were tracked continuously until they disintegrated, in order to determine if they were moving into this locality with a definite current, or were merely following the wind. One berg was tracked continuously from April 11 to April 21, following a roughly circular path with an average diameter of about 50 miles. An analysis of this drift is considered in detail in the section on oceanography.

Twelve aerial surveys were made by Ice Patrol aircraft during April. It is estimated that 12 bergs came south of 48°00' N. during

the month, but that none drifted south of 47°00' N. Limits of pack and berg ice were much less than the average limits shown in the Ice Atlas of the Northern Hemisphere. Distribution of ice is shown in figures 2 and 3.

MAY

Flights on the 2d and 3d of May showed that the pack ice found along the northeast slope of the Grand Banks during the latter part of April had all disappeared, leaving only scattered small bergs and growlers in the area from 47°50' N., to 49°00' N., between 47°00' W., and the coast. Poor weather made aerial searches impractical again until the 9th of May, at which time it was found that the pack ice between Cape Freels and Cape Bauld, Newfoundland, had largely receded from its most easterly position during April, and now was limited by a line running approximately from Cape Freels to 50°00' N., 52°50' W., to 52°30' N., 54°20' W. North of the last position however, it was reported that the ice extended northeast to 52°30' W., and contained many bergs and growlers.

On the 13th of May, an extensive ice reconnaissance flight over the northern and eastern slope of the Grand Banks revealed that all vestiges of ice previously known to be in this area had disappeared, except for a few scattered bergs and growlers along the coast near Cape Bonavista. Evidently the prevailing winds from the easterly quadrants during the first 2 weeks of May, coupled with the rapidly warming water, had erased all danger along the northern slope of the Grand Banks by a combination of melting the ice and driving it aground.

Further flights on the 16th and 17th of May showed that there was no ice in the Labrador Current, as far north as 52°00' N., except for scattered bergs and growlers along the east coast of Newfoundland between Cape Freels and Cape Bauld. Even the pack ice had disappeared in this area, except for a narrow belt along the shore from Cape St. John to Hare Bay.

A search off the Labrador coast between Belle Isle and Hamilton Inlet on May 19 indicated that heavy arctic pack, carrying many bergs, had started southward. The outer limits of the pack on this date ran from 51°20' N., 55°30' W., to 52°00' N., 52°30' W., to 54°30' N., 52°40' W., thence west-northwest. This ice was observed to be mainly consolidated west of 54°30' W., and was populated with large numbers of bergs and growlers. A flight on 24 May to verify the movement of this same ice showed that the outer limits were defined approximately by a line from 51°00' N., 55°50' W., to 52°10' N., 51°10' W., thence north, consisting mainly of drift ice east of 54°00' W.

Ice conditions in the St. Lawrence area improved rapidly early in the month. On May 2 the Strait of Canso and Northumberland Strait were reported navigable with caution, and on May 5 daily aerial surveys of the St. Lawrence area were discontinued. On May 16

the last ice report of the year was issued by the Canadian Department of Transport and all routes to the St. Lawrence were reported clear for navigation except via the Strait of Belle Isle.

Nine aerial surveys were made by Ice Patrol aircraft during May. It is estimated that two bergs came south of 48°00' N. during the month, but that none drifted south of 47°00' N. Limits of pack and berg ice were less than the average limits shown in the Ice Atlas of the Northern Hemisphere. Distribution of ice is shown in figure 4.

JUNE

On the 1st day of the month a flight was made to search the east coast of Newfoundland from Cape St. Francis north, and the area from Belle Isle east to 50°00' W. Scattered bergs and growlers were found along the coast from Cape Bonavista to Fogo Island, and also in the vicinity of Funk Island. The pack ice blocking the eastern entrance to the Strait of Belle Isle was found to be deteriorating rapidly, although many bergs and growlers were still held in the ice, which was limited by a line running approximately from Hare Bay, Newfoundland, to 52°00' N., 54°00' W., thence north. Some loose strings of ice were found to eastward of this line, and many bergs and growlers in the vicinity of 52°00' N., 51°30' W. The most southerly ice sighted on this flight, which was far enough out in the Labrador Current to make possible a further movement into the more heavily traveled areas, were a berg and two growlers near 51°45' N., 51°30' W., and a radar target, evaluated as a growler, at 51°42' N., 50°40' W.

A flight on June 6, under conditions of better visibility, found the pack ice limits essentially the same, with the exception that the band of ice blocking the Strait of Belle Isle extended south to the Gray Islands. Fewer bergs and growlers were found in the previously well populated area near 52°00' N., 51°30' W., although two small growlers were sighted near 51°15' N., 49°50' W., indicating further southerly movement of the ice sighted on June 1.

The last ice observation flight of the season was made on June 12, with poor visual conditions prevailing. Pack ice in the Belle Isle area had further receded, and was now bounded by a line from the Gray Islands to 52°15' N., 54°30' W., with the more northerly extension not determined. Bergs in the Labrador Current east of Belle Isle had practically disappeared except for two radar targets, probably growlers, at 50°30' N., 48°10' W.

Since rapid deterioration of ice was apparent, and because of the seasonal advance of warmer air and increasing water temperatures, it was considered very unlikely that any ice could survive the journey to the Grand Banks. Consequently, Ice Patrol services for the year were terminated on June 16. Ice reports during the remainder of the month indicated little change in the conditions previously described.

Three ice observation flights were made during the first 2 weeks of the month before Ice Patrol services were concluded. No known

icebergs drifted south of 48°00' N. Limits of pack and berg ice were less than the average limits shown in the Ice Atlas of the Northern Hemisphere.

JULY

On July 3, the pack ice had retreated from the eastern entrance of the Strait of Belle Isle, and since only scattered bergs and growlers remained in the strait proper, the passage was considered navigable. Bergs continued a slow southerly movement during the entire month. The most southerly reportings, a growler on July 9 at 48°49' N., 44°24' W., and a radar target, possibly a growler, at 48°52' N., 45°21' W., on July 25, were on the eastern edge of the Labrador Current in positions which would in all probability insure their drift to the northward, as all three oceanographic surveys had indicated a recurvature of the Labrador Current in that direction north of Flemish Cap.

On July 28, at the request of Commander, International Ice Patrol, the Coast Guard Air Detachment, Argentia, made a postseason ice observation flight covering the coastal area near Cape Bonavista and the Labrador Current between 50°00' N., and 52°00' N. Numerous bergs and growlers were sighted within a 50-mile radius of 51°00' N., 51°00' W., but high surface water temperatures appeared to leave little likelihood that there would be any drift south of 48°00' N.

Two postseason aerial reconnaissance flights were made during the month. No known icebergs drifted south of 48°00' N. Limits of pack and berg ice were less than the average limits shown in the Ice Atlas of the Northern Hemisphere.

AUGUST

Although the southerly drift of most of the bergs reported in July had been halted, some bergs continued their southward movement in the Labrador Current. On August 6, one berg was sighted as far south as 49°32' N., 50°11' W. No sea ice was reported. Four postseason aerial reconnaissance flights were made during the month.

SEPTEMBER

Some bergs remained potential threats by continuing to move southward. On September 18, several bergs were reported at 49°00' N., 49°52' W. This slow southerly movement was completely halted before the end of the month. The last postseason aerial reconnaissance flight of the year, on September 29, showed that there was no longer any ice below 50°00' N. There were 5 postseason aerial reconnaissance flights in September making a total of 11 such flights for the year.

OCTOBER-NOVEMBER-DECEMBER

Icebergs continued to be reported in October, and one large berg was reported as far south as 50°17' N., 49°35' W. on the 22d. The last ice reported in 1952 was a berg in the Belle Isle Straits on 30 October.

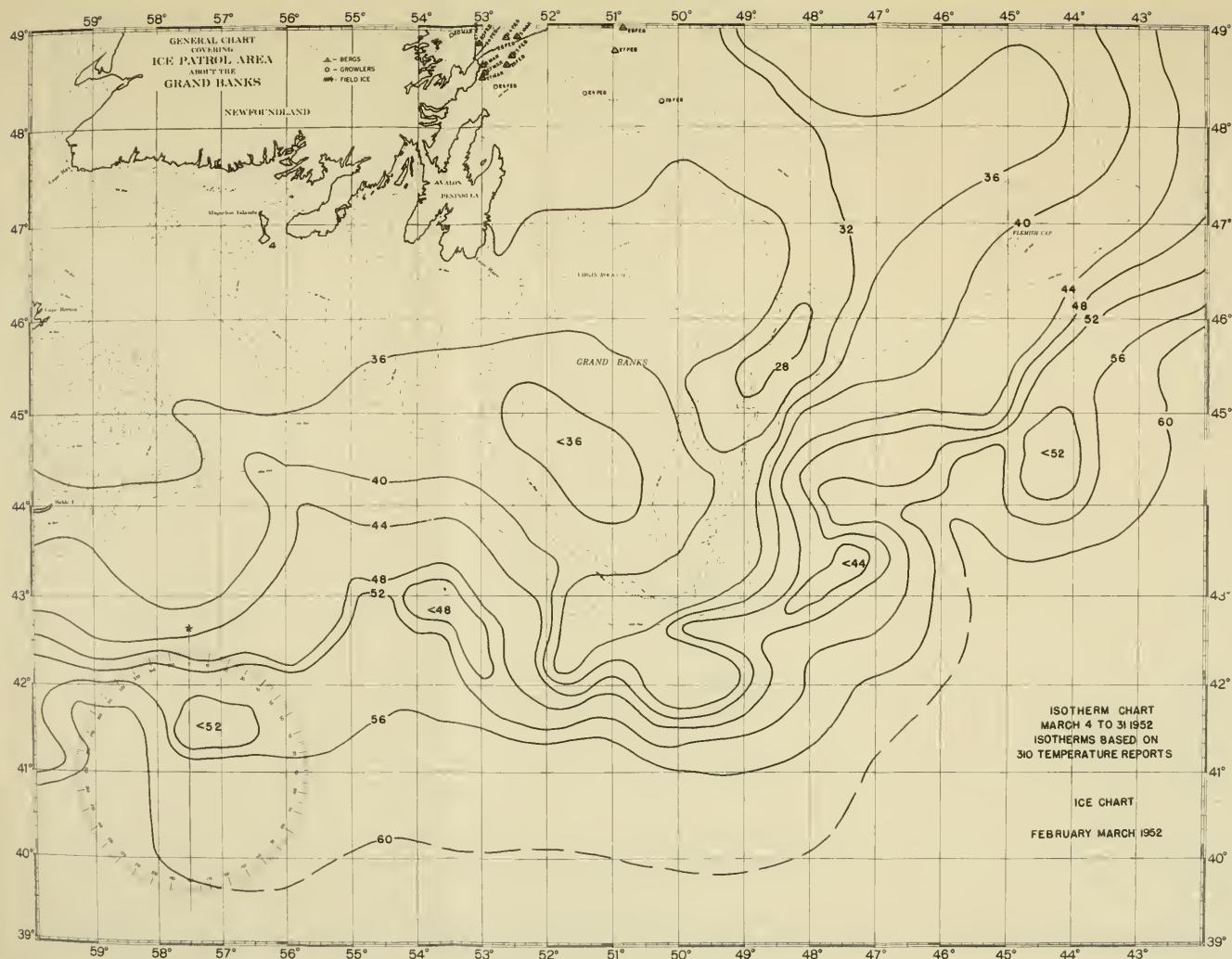


FIGURE 1.—ICE CONDITIONS, FEBRUARY–MARCH, 1952, AND SURFACE ISOOTHERMS FOR THE PERIOD 4–31 MARCH, 1952.

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On July 3, t of the Strait of remained in the Bergs continued The most south $44^{\circ}24'$ W., and $45^{\circ}21'$ W., on Current in pos drift to the nor cated a recurva of Flemish Cap.

On July 28, a the Coast Guar observation fligl the Labrador C bergs and growl $51^{\circ}00'$ W., but little likelihood

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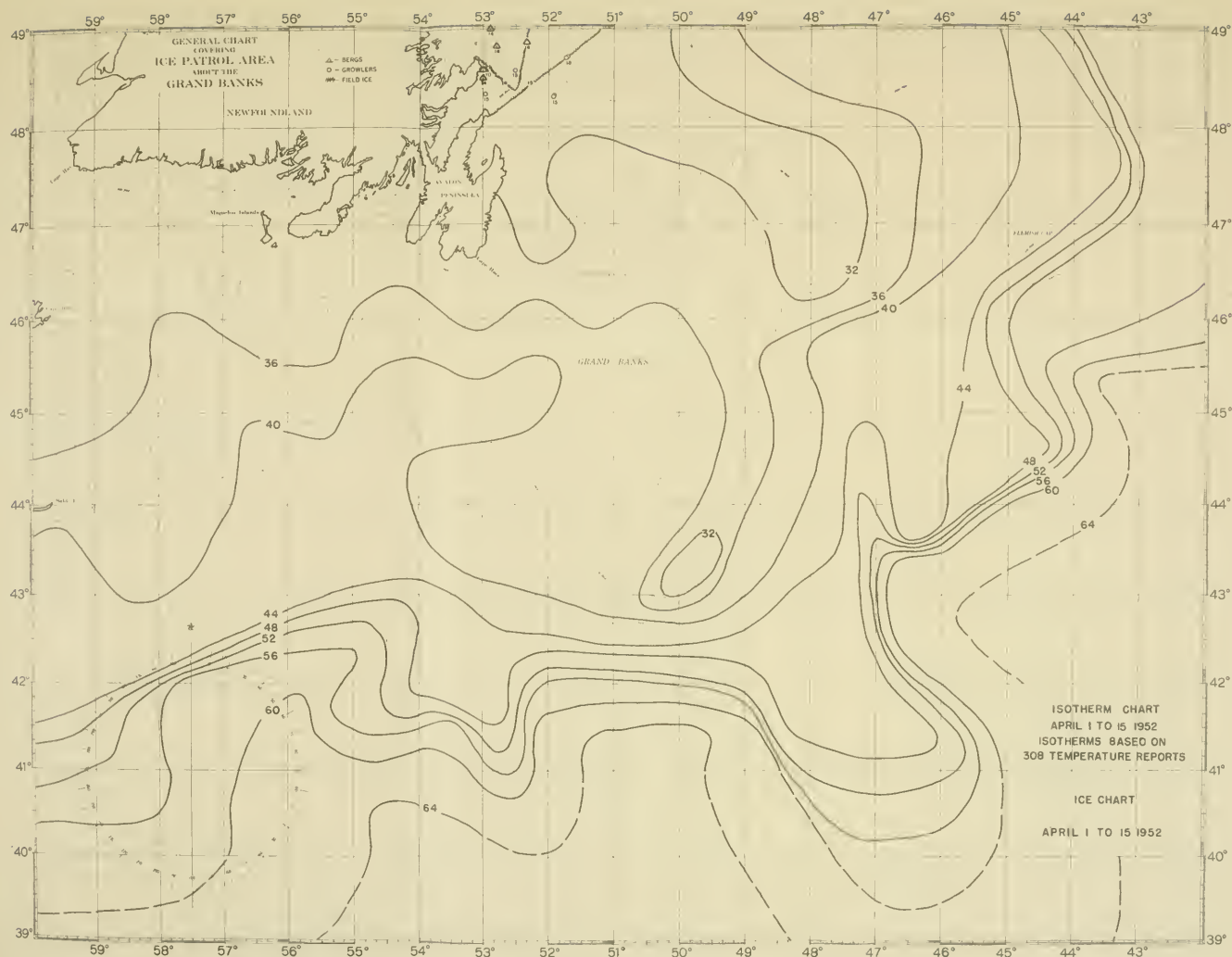


FIGURE 2.—ICE CONDITIONS AND SURFACE ISOOTHERMS FOR THE PERIOD 1-15 APRIL, 1952. FIGURES INDICATE DAY OF MONTH ICE WAS SIGHTED OR REPORTED.

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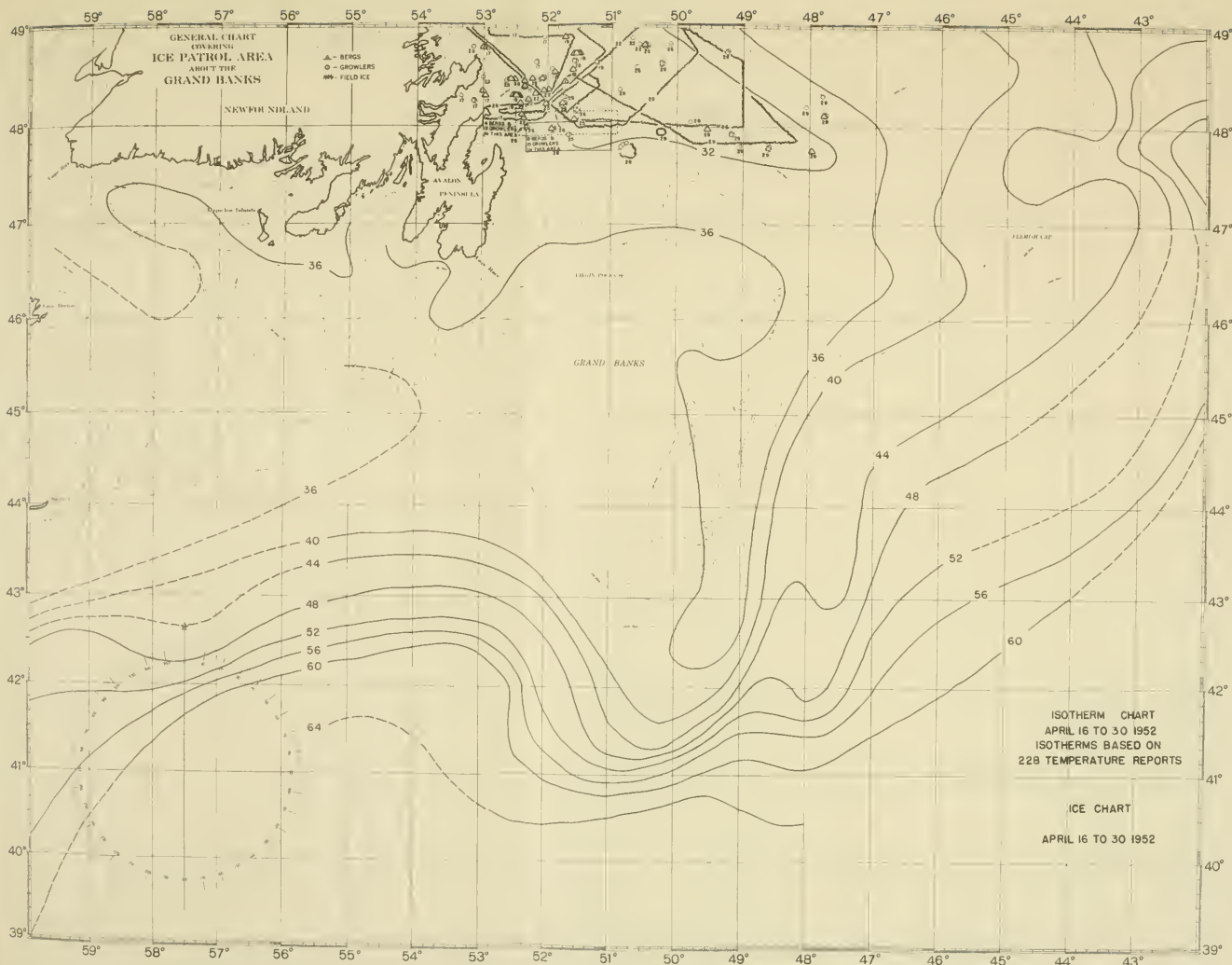


FIGURE 3.—ICE CONDITIONS AND SURFACE ISOTHERMS FOR THE PERIOD 16-30 APRIL, 1952. FIGURES INDICATE DAY OF MONTH ICE WAS SIGHTED OR REPORTED.

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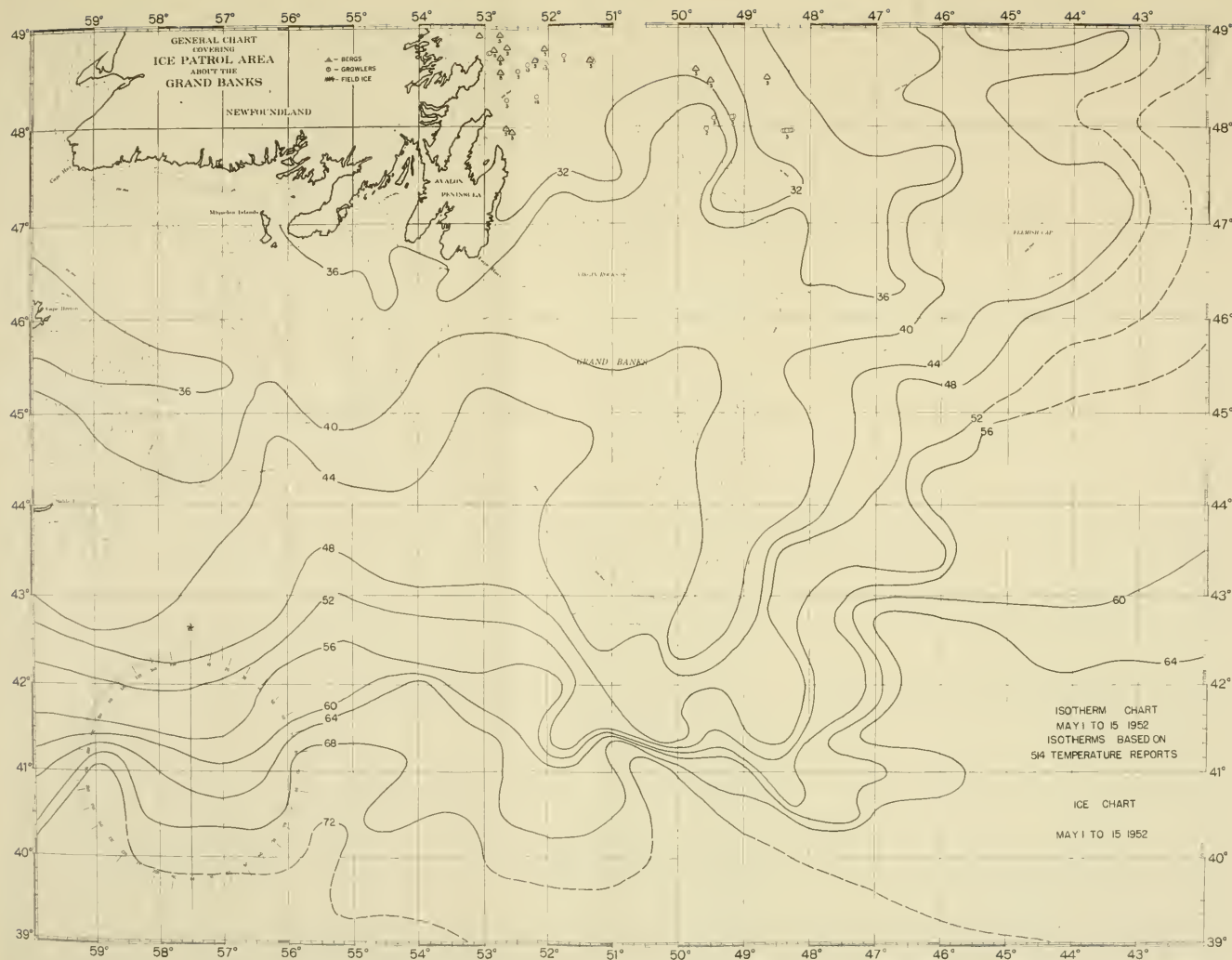


FIGURE 4.—ICE CONDITIONS AND SURFACE ISOTHERMS FOR THE PERIOD 1-15 MAY, 1952. FIGURES INDICATE DAY OF MONTH ICE WAS SIGHTED OR REPORTED.

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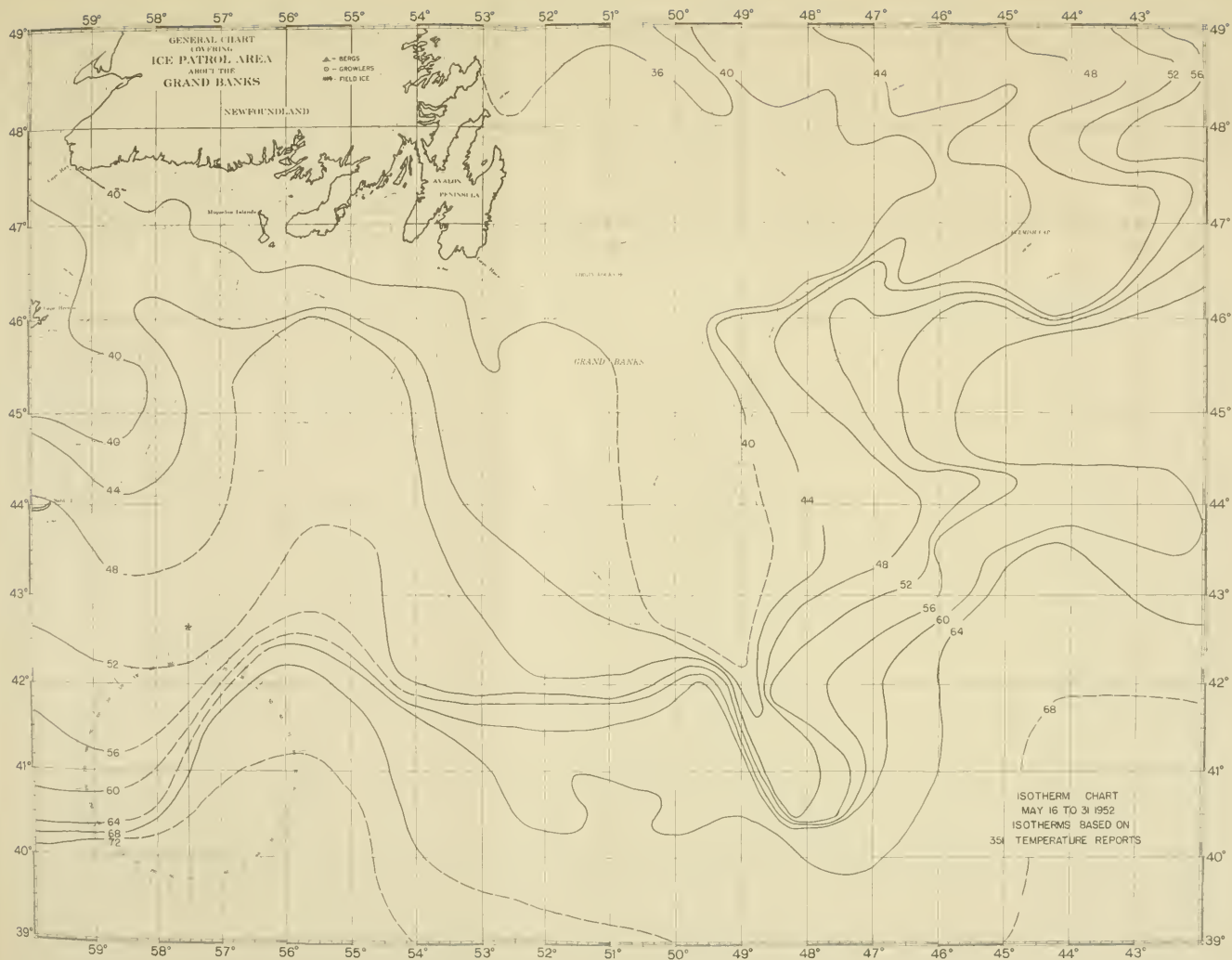


FIGURE 5.—SURFACE ISOTHERMS FOR THE PERIOD 16-31 MAY, 1952. NO ICE WAS SIGHTED OR REPORTED WITHIN THE LIMITS OF THIS CHART DURING THE PERIOD.

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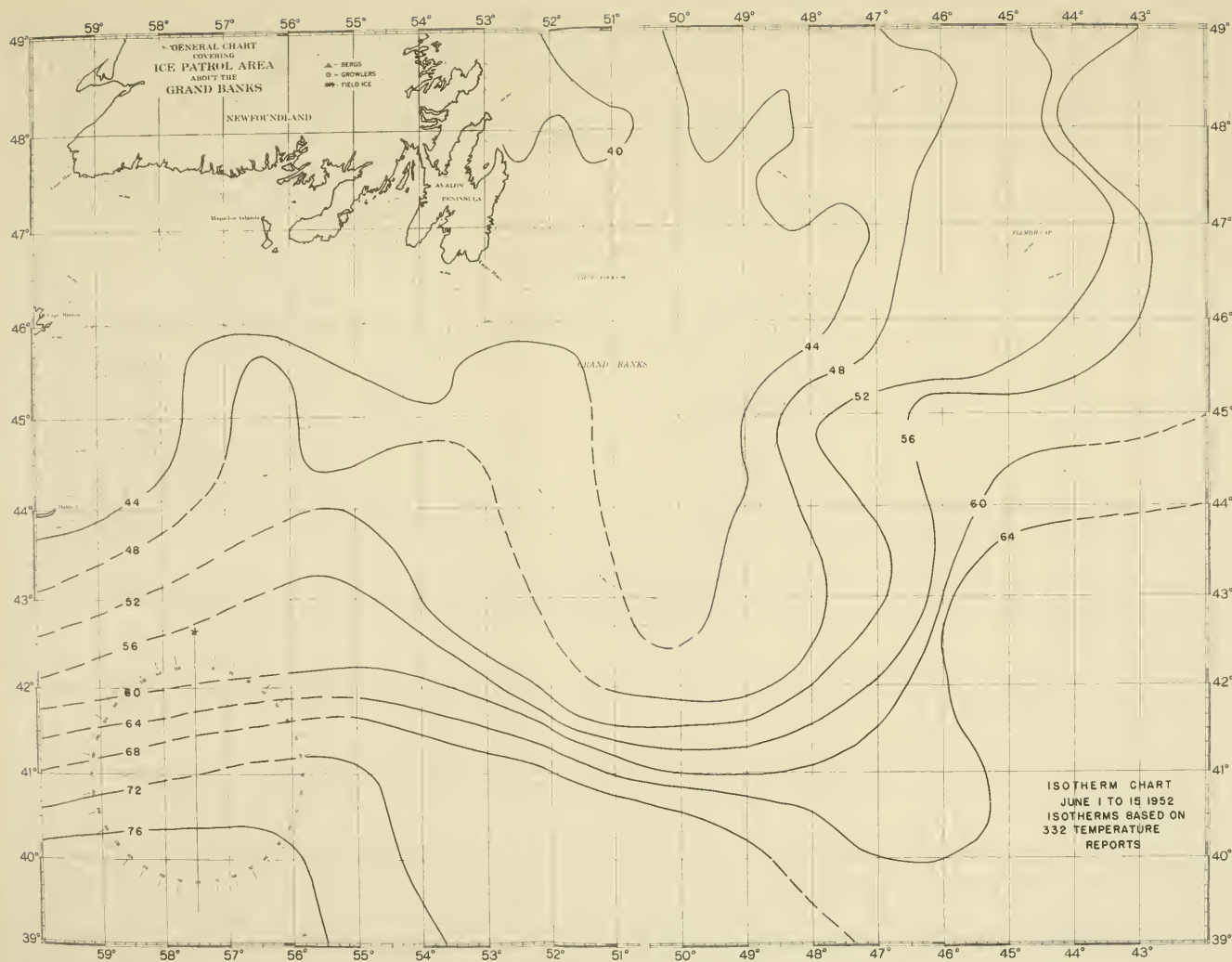


FIGURE 6.—SURFACE ISOTHERMS FOR THE PERIOD 1-15 JUNE, 1952. NO ICE WAS SIGHTED OR REPORTED WITHIN THE LIMITS OF THIS CHART DURING THE PERIOD.

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TABLE OF ICE REPORTS, 1952

No.	Date	Name of vessel	North latitude	West longitude	Description
1	Jan. 17	USCG aircraft.....	50 00	55 00	Pack ice 90 coverage along track.
2	do	Hydro., Wash	52 20	55 40	
			Area 150 miles south and south-east of Cape Farewell, Greenland.		Several bergs and growlers.
3	Jan. 20	do	59 00	38 25	Small berg.
4	do	do	59 30	37 30	Do.
5	Jan. 21	U. S. C. G. cutter Mata-gorda.	53 06	52 57	Pack ice varying from drift ice to open pack 2 to 5 miles either side of track. Occasional cakes 30 to 50 feet diameter.
			52 58	52 57	
6	do	do	52 54	52 58	Do.
7	Jan. 22	do	52 04	52 53	Limit of observed field ice.
			52 02	52 50	
			52 05	52 10	
			51 30	52 00	
			51 25	51 30	
			51 06	51 23	
8	Jan. 30	USCG aircraft.....	50 39	51 30	Limits of close pack ice with 10-mile margin of above consisting of brash, slush, and scattered floes.
			50 30	52 13	
			49 55	52 15	
			49 36	52 48	
			Cape Freels		
9	do	do	52 13	55 10	Berg.
10	do	do	52 14	53 32	Do.
11	do	do	51 48	53 34	Do.
12	do	do	51 44	54 02	Do.
13	do	do	51 57	53 21	Do.
14	do	do	51 24	53 43	Do.
15	do	do	51 40	52 55	Do.
16	do	do	51 18	52 48	Do.
17	do	do	51 35	52 05	Do.
18	do	do	52 03	53 10	Growler.
19	do	do	51 34	52 44	Do.
20	do	do	50 00	52 00	Scattered floes and slush ice along irregular line.
			49 03	51 45	
21	Feb. 2	Sapho.....	58 53	33 15	Berg with 2 summits about 170 feet high and 450 feet in length.
22	Feb. 8	U. S. C. G. cutter Absecon.	53 19	50 47	Berg.
23	do	do	51 15	50 46	Extensive field ice.
			52 30	50 48	
24	do	do	53 04	50 35	Small berg.
25	do	do	53 10	50 54	Do.
26	Feb. 9	U. S. C. G. cutter Camp-bell.	60 32	35 03	Large berg.
27	Feb. 10	do	59 11	37 28	Do.
			Cape Bonavista		
28	Feb. 11	USCG aircraft.....	50 00	52 00	Scattered patches of slush ice.
			50 00	52 18	
			50 33	52 00	
29	do	do	5 54	51 43	Limits of close pack ice with slush ice extending 20 miles south of line of close pack ice between longitudes 50° W and 51° W.
			51 10	51 11	
			51 21	50 19	
30	do	do	51 45	51 49	Small berg.
31	do	do	51 53	51 02	Large berg.
32	Feb. 22	P. A. A. aircraft.....	54 38	56 07	Do.
			48 40	53 20	
33	Feb. 24	Ice Patrol plane.....	49 30	52 45	Consolidated pack limit with isolated strings of slush forming 30 miles margin east of this line.
			48 55	52 38	
34	do	do	49 05	53 08	Berg.
35	do	do	49 29	52 12	Do.
36	do	do	48 20	51 26	Small berg.
37	do	do	48 20	51 26	Small growler.
38	do	Cumulus.....	62 08	33 03	Large berg.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			Cape Bonavista		
39	Feb. 25	Ice patrol plane	49 00	52 00	Pack ice grades from slush on eastern edge to consolidated pack to west.
			51 20	52 00	
40	do	do	thence northerly		
41	do	do	48 38	52 38	Berg.
42	do	do	48 44	52 33	Do.
43	do	do	48 51	52 33	Berg (same as No. 34).
44	do	do	49 11	52 11	Berg (same as No. 36).
45	do	do	49 59	52 53	Berg.
46	do	do	50 22	53 27	Do.
47	do	do	50 36	53 32	Do.
48	do	do	51 05	53 55	Do.
49	do	do	51 29	52 41	Do.
50	do	do	48 25	52 48	Growler.
51	do	do	50 10	53 30	2 growlers.
52	do	do	50 14	52 12	Growler.
53	do	do	50 50	53 40	Do.
54	do	do	50 54	53 10	Do.
55	do	do	51 05	51 21	Do.
56	Feb. 26	Finn trader	51 10	53 40	Do.
57	do	Aircraft	48 16	50 16	3 growlers.
58	do	Hydro., Wash.	49 13	52 10	Berg.
59	do	Narsarssuak AFB	52 52	39 28	Long line of growlers.
60	Feb. 27	Narsarssuak AFB			6 large bergs seaward from BW-3, large bergs in fjord.
61	do	U. S. C. G. cutter Barataria.	48 46	50 59	5 large bergs seaward from BW-3, small berg in BW-3 harbor.
62	Feb. 28	U. S. C. G. cutter McCulloch.	49 00	50 52	Large berg.
63	Feb. 29	Narsarssuak AFB			Berg.
64	Mar. 1	Ice Patrol plane	47 42	51 20	6 large bergs seaward from BW-3, 3 large bergs in fjord, 2 bergy bits and 2 growlers in harbor.
65	do	do	47 35	49 07	String of slush, 1 mile long, 25 feet wide northeast to southwest.
66	Mar. 3	Narsarssuak AFB			Radar target.
					Small scattered bergs within 25 miles of coast. 1 small berg and 1 growler in fjord. 4 bergy bits, 4 growlers, and small amount of brash in harbor.
67	Mar. 4	Anguslake	45 05	61 00	Drift ice.
68	Mar. 5	Ice Patrol plane	Cape Freels to Funk Island thence north-northwest.		Loose strings pack ice with margin or close pack 30 miles to westward.
69	do	do	48 38	53 00	Berg.
70	do	do	48 55	52 28	Do.
71	do	do	49 48	54 55	Do.
72	do	do	50 21	54 47	Do.
73	do	do	50 33	54 45	3 bergs.
74	do	Ice Patrol plane	51 42	55 25	Berg.
75	do	do	51 48	55 30	Do.
76	do	do	51 49	55 22	Do.
77	do	do	51 50	55 18	Do.
78	do	do	51 58	55 28	Do.
79	do	do	52 03	55 16	Do.
80	do	do	52 04	55 24	Do.
81	do	do	52 08	55 10	Do.
82	do	do	52 08	55 33	Do.
83	do	do	52 10	55 20	Do.
84	do	Narsarssuak AFB			Numerous bergs and growlers seaward. Few growlers in fjord. 3 large bergs, 2 bergy bits and scattered growlers in BW-3 harbor.
85	Mar. 6	Ice Patrol plane	49 55	53 00	
			to		
			49 30	53 00	
86	Mar. 7	do	49 30	53 10	Open pack in loose strings.
			to		
			50 20	53 10	
87	do	Narsarssuak AFB			Eastern limit open pack ice.
88	Mar. 10	do			
					BW-3 harbor, 3 small bergs, 4 growlers. Close pack ice and 2 large bergs to seaward of BW-3. 2 small bergs in fjord. 2 bergs, 4 growlers, large amount pack ice in harbor.
89	do	Canadian Department of Transport.	Northeast coast of Cape Breton Island		Close pack from Cape North to Cape Morien.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
90	Mar. 10	Canadian Department of Transport.	° / °	° / °	Close pack limit with strings of drift ice between Fame Point and Anticosti Island and to northwest in River St. Lawrence.
91	Mar. 12	Narsarssuak AFB.			6 large bergs and large amount open pack seaward of BW-3, $\frac{4}{10}$ to $\frac{5}{10}$ pack ice coverage in fjord, BW-3 harbor few growlers.
92	Mar. 13	Fort Avalon.	47 29	59 33	String ice.
93	Mar. 15	Narsarssuak AFB.			Seaward of BW-3 close pack ice, fjord completely covered, harbor $\frac{5}{10}$ covered pack ice.
94	Mar. 17	do.			Seaward of BW-3 close pack ice to limit of visibility. Harbor $\frac{5}{10}$ covered pack ice.
95	Mar. 18	OSV Baker.	56 16	50 24	1 small berg and growler.
96	do.	Narsarssuak AFB.			Pack ice, Narsak to BW-3, seaward of BW-3, 7 large bergs, 5 small bergs, and open pack ice. Fjord and harbor closed with pack ice.
97	Mar. 19	OSV Baker.	56 58	50 36	Small berg.
98	do.	do.	57 07	50 35	Do.
			52 30	55 20	Limit of close pack ice, with consolidated pack close to land and 10-mile margin of open pack eastward of close pack, strings and scattered floes eastward of open pack to $54^{\circ}10'W$.
99	do.	Ice Patrol plane.	53 30	55 20	
			54 50	55 50	
			54 00		
100	do.	do.	54 40		About 30 bergs in area west of $55^{\circ}40'W$.
101	do.	do.	54 28	54 48	Large tabular berg.
102	do.	do.	53 46	54 51	Do.
103	do.	do.	53 25	55 50	Three grounded bergs near Spotted Island.
104	do.	do.	54 14	54 25	Growler.
105	do.	do.	53 37	54 15	Do.
106	do.	do.	53 32	53 51	Do.
107	do.	do.	52 48	55 35	Do.
108	do.	Canadian Department of Transport.	Gulf of St. Lawrence.		Close pack ice in Northumberland Strait and Strait of Canso. North and East edge of Gulf ice in a line from 10 miles southeast Amherst Island to St. Paul Island to Flint Island. Small isolated patch of ice 20 miles northeast St. Paul Island.
109	do.	Narsarssuak AFB.			BW-1 to BW-3 pack ice, fjord frozen lightly. Seaward BW-3, 25 large bergs, small amount brash, growlers, bergy bits, BW-3 harbor 4 growlers.
110	Mar. 20	USN aircraft	58 45	46 50	Large berg.
111	do.	Narsarssuak AFB.			BW-1 to BW-3 ice 6 inches thick. Aerial report at $60^{\circ}47'N$ $45^{\circ}00'W$, ice begins with large fingers to north clear for 10 miles to east of BW-3. Pack ice at mouth of Tunugdliarfik Fjord.
112	do.	Ice Patrol plane.	East coast of Newfoundland.		Loose pack ice west of $53^{\circ}00'W$ between $50^{\circ}30'N$ and $49^{\circ}20'N$, to coast. Close-loose pack ice west of $55^{\circ}10'W$ from $51^{\circ}50'N$ to $52^{\circ}30'N$. Several strings of scattered floes at $52^{\circ}05'N$, $53^{\circ}35'W$.
113	do.	do.	48 57	53 31	Growler.
114	do.	do.	49 12	53 28	Growler (aground).
115	do.	do.	49 18	53 27	Do.
116	do.	do.	52 17	55 25	Do.
117	Mar. 21	OSV Baker.	56 38	50 03	Small berg.
118	do.	U. S. N. S. Tontii.	Cabot Strait.		Ice patch $\frac{1}{2}$ mile wide by 3 miles long, 130° , 41 miles from St. Paul Island.
119	do.	Narsarssuak AFB.			Ice extending westward from Cape Farewell to $46^{\circ}30'W$. Small ice at Narsak crossover.
120	Mar. 22	do.			25 bergs (large) and few bergy bits and growlers seaward of BW-3, 3 growlers in BW-3 harbor. Fjord $\frac{5}{10}$ pack ice.
121	do.	Anguslake.	45 58	58 50	Slush ice in water.
122	do.	U. S. N. LST 694.	Cabot Strait.		Open field ice in a northwest-southeast line approximately 14 miles southwest of Cape Ray.
123	Mar. 24	U. S. C. G. LTS, Bonavista, Newfoundland.			Sea area to horizon covered with slush ice. Bonavista Bay area full of wind driven ice.
124	do.	OSV Baker.	56 05	50 06	Small berg with growler.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
125	Mar. 24	Narsarssuak AFB	° /	° /	Pack ice between BW-3 and Narsak. Ice extends from BW-1 for 4 miles seaward of BW-3, 20 large bergs few growlers.
126	Mar. 25	St. Paul Island radio			Southeast to southwest loose packed ice. West close packed to horizon.
127	do.	U. S. S. Cross	55 46	49 49	Small berg.
128	do.	do	56 08	49 49	Do.
129	do.	do	56 39	49 22	Large berg.
130	do.	do	57 07	49 25	Do.
131	do.	Narsarssuak AFB			Narsak to BW-3 open pack ice. Seaward of BW-3, close pack ice.
132	Mar. 26	do			Light open pack ice at BW-1. Fast ice 3 to 4 inches thick. Sugar Loaf to dock.
133	do.	Canadian Department of Transport.	48 25 to 47 10 to Miscou Island to 46 48 to 46 50 to 47 18 to 47 40	64 25 to 63 50 to 63 08 to 62 10 to 61 21 to 61 20	Northern and eastern limits of gulf ice with open and close pack south and west of this limit and in Strait of Canso.
134	do.	U. S. N. S. Short Splice	58 31	48 47	Scattered small bergs.
135	Mar. 27	Anguslake	46 00	58 30	Extensive field ice.
136	do.	U. S. N. S. Short Splice	49 45 47 30	48 01 61 15	Widely scattered bergs.
137	do.	Canadian Department of Transport.	47 39 to 46 39 to 46 26 to 46 30	60 33 to 58 45 to 59 02 to 59 18	Outer limits of gulf ice with open and close pack ice inside this line to Cape Breton coast.
138	do.	do			
139	do.	Narsarssuak AFB			Heavy drift from Cape Morien to 12 miles south Seatori Island.
140	do.	Ice Patrol plane	Cape Bonavista to 50° 00' N. 53° 30' W. thence northwest to visibility		In Tunugdliarfik Fjord, pack ice from Narsak to BW-3 small amount ice at mouth of Brede Fjord. Pack ice 3 to 4 inches thick extending 6 to 7 miles from dock. BW-1 4 large bergs and small amount pack seaward.
141	do.	do	48 30	53 00	Limits of pack ice, loose pack to close pack. Limits all ice within line from 48°30' N. 53°00' W. to 48°40' N. 52°30' W., thence northwest through Funk Island. Strings of drift ice to 15 miles east of Cape Bonavista (easternmost ice).
142	do.	do	48 33	52 58	Berg (aground).
143	do.	do	49 13	53 22	Do.
144	do.	do	49 13	53 26	Growler.
145	do.	do	49 16	53 26	Do.
146	do.	do	49 54	53 32	Do.
147	do.	do	49 57	53 32	Berg.
148	do.	do	49 57	53 34	Do.
149	do.	do	49 58	53 39	Do.
150	Mar. 28	Anguslake	45 44	58 37	Large berg.
151	do.	U. S. N. S. Short Splice	60 52	46 31	Drift ice.
152	do.	Narsarssuak AFB			Brede Fjord 5/10 bergs with growlers and pack ice.
153	do.	OSV Baker	55 19	50 42	BW-1 fjord, scattered ice extending out 3 to 4 miles. Seaward of BW-3, 2 bergs small amount pack ice, 1/10 pack ice in fjord.
154	Mar. 31	do	56 48	51 09	Large berg.
155	do.	Narsarssuak AFB			Small berg and growlers.
156	Apr. 1	OSV Bravo (Baker)	56 56	50 44	Seaward of BW-3, 5 large bergs, small amount of pack ice. 5/10 pack ice in fjord. Small amount pack in harbor.
157	do.	do	56 41	50 34	Medium berg.
					Small berg with 1 huge growler and 1 large growler, 3,000 yards eastward.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
158	Apr. 1	Canadian Department of Transport.	Gulf of St. Lawrence.		Northern limits Gulf ice from Shipigan Island to North Point to East Point, Prince Edward Island to 47°20' N. 60°50' W. to St. Paul Island with open and close pack inside this line to shore. Close pack along east coast Cape Breton Island. Open and close pack in Strait of Canso.
159	do	Narsarssuak, AFB			Seaward of BW-3, 2 large bergs, small amount pack ice. In fjord $\frac{3}{4}$ pack ice. In harbor 2 bergy bits, $\frac{3}{4}$ pack ice.
160	do	USMATS aircraft	51 20	57 00	Berg.
161	Apr. 2	OSV Bravo	56 47	51 25	2 growlers.
162	do	do	56 35	51 27	Small berg.
163	do	Narsarssuak AFB			Seaward from BW-3 $\frac{3}{4}$ pack ice. In fjord $\frac{3}{4}$ pack ice near BW-3. In harbor 1 growler and loose pack ice.
164	do	Canadian Department of Transport.	Gulf of St. Lawrence.		Ice field near 49°20' N 61°30' W. Outer limits ice off east coast of Cape Breton Island from St. Paul Island, to 46°35' N. 59°19' W. to 46°34' N. 59°14' W. to 46°05' N. 58°00' W. to 45°40' N. 59°20' W. to 45°45' N. 59°43' W. to east end Scatarl Island, with open and close pack ice inside this line.
165	Apr. 3	Narsarssuak AFB			Scattered 9 growlers between BW-1 and Narsak, Seaward BW-3, 6 small bergs and small amount pack ice. Pack ice in upper fjord.
166	do	OSV Bravo	56 16	50 58	Small growler.
167	Apr. 4	Narsarssuak AFB			In fjord scattered growlers and bergs and heavy ice. Seaward of BW-3, 5 large bergs few growlers, small amount pack ice. Harbor clear.
168	do	Canadian Department of Transport.	Gulf of St. Lawrence.		Quebec to Cape des Rosiers: some scattered ice.
169	Apr. 5	do	do		Louisburg Harbor; ice $\frac{1}{2}$ mile offshore. $\frac{3}{4}$ pack in Strait of Canso. Ice strip 8 miles long, 2 miles wide off Tablehead, Anticosti Island.
170	Apr. 6	Ice Patrol plane	50 15 50 10 49 35	54 20 to 53 30 to 52 50	Outer limit pack ice with consolidated pack inside this line. Radar indicated pack within 20 miles north of Cape Bonavista. Occasional small pieces of ice less than 6 feet west of 52° W. and north of 50°15' N.
171	Apr. 7	Canadian Department of Transport.	Gulf of St. Lawrence.		Approaches to Sydney harbor, close packed. Louisburg harbor and approaches close packed.
172	do	do	St. Paul Island 47 14 46 25 46 24	59 00 to 58 40 to 59 20	Outer limits of Gulf ice.
173	do	Narsarssuak AFB	3 miles off Scatarl I. to 6 miles off Louisburg to Point Michaud.		
174	do	Sunavis	46 55	58 47	BW-1 harbor and fjord few scattered patches of ice and growlers. Seaward of BW-3, 15 large bergs, small amount of pack ice. BW-3 harbor, 5 growlers.
175	Apr. 8	do	47 23	59 30	Loose slush ice.
176	do	OSV Bravo	55 28	50 35	Northern edge of ice pack.
177	Apr. 9	Narsarssuak AFB			Large growler.
178	do	Ice Patrol plane	Cape Freels to 50 08 thence west-north-west to limit of visibility.	53 08	Patch ice and few growlers in BW-1 harbor and fjord.
					Outer limits pack ice with consolidated pack and occasional growlers inside this line.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
179	Apr. 9	Ice Patrol plane.....	Labrador coast.....		East coast Cape Bauld, scattered strings. 3 growlers in south pass, Strait of Belle Isle. Eastern limit Labrador pack from 51°45' N. 56°00' W. estimated to Belle Isle to 53°30' N. 54°40' W. thence northeast to visibility limit with consolidated pack inside this line. About 25 bergs and growlers in pack between Belle Isle and 53°30' N. all west of 55°00' W. 9 large bergs and 12 growlers within 10-mile radius of 54°00' N. 54°45' W. About 50 bergs and growlers between 53°30' N. 54°10' N., west of 55°00' W. Small ice floe.
180	do	U. S. S. Lindenwald.....	47 00	58 56	Do.
181	do	do.....	46 36	58 34	
			53 30	55 40	
182	Apr. 10	Ice Patrol plane.....	54 25	53 40	Outer edge Labrador pack.
			55 40	55 40	
			thence northwest		
			Cape Frels to		
183	do	do.....	49 30	53 00	Eastern limits of Newfoundland pack.
			50 03	52 35	
			50 08	53 08	
184	do	do.....	48 35	53 00	2 bergs.
185	do	do.....	55 00	55 45	5 bergs and 3 growlers.
186	do	do.....	55 25	56 30	2 bergs.
187	do	do.....	56 16	51 37	Berg.
188	do	do.....	57 28	49 50	Do.
189	do	do.....	56 46	49 18	2 growlers.
190	do	Narsarssuak AFB.....			BW-1 harbor, pan ice and 2 small bergs. Ice 6 to 7 inches from Narsak to BW-3. Small amount pack ice in BW-3 harbor.
191	do	U. S. N. S. William J. O'Brien.	Cabot Strait.....		Large field of ice bearing 205° from Cape Ray distance 10 miles.
192	do	U. S. C. G. cutter Coos Bay.	56 16	51 37	Berg.
193	do	do.....	57 02	49 58	Do.
194	do	do.....	56 46	49 18	2 growlers.
195	do	OSV Bravo.....	56 14	51 25	Berg.
			Point Michaud to 15 miles off Guion Island to 6 miles off Louisburg to		
196	do	Canadian Department of Transport.	46 16	59 03	Outer limits of gulf ice.
			46 05	58 27	
			46 11	58 10	
			47 00	48 45	
			48 10	61 20	
			Point Michaud to 15 miles off Guion Island to		
197	Apr. 11	do.....	46 16	59 03	Do.
			46 05	58 27	
			47 49	60 10	
			48 24	61 32	
198	do	Narsarssuak AFB.....			Between BW-1 and BW-3, few scattered bergs and patch ice. Seaward of BW-3, 5 large bergs, small amount pack ice. In fjord 3 large bergs and small amount pack ice.
199	do	OSV Bravo.....	56 09	50 54	Berg with 6 growlers, broken away from berg.
200	do	Aircraft.....	55 47	47 30	Large berg.
201	do	Manchester merchant.....	47 30	59 15	Eastern limit of ice.
202	Apr. 12	OSV Bravo.....	47 40	59 25	Berg.
203	do	Stavangerfjord.....	55 57	50 49	Field ice.
			45 16	59 48	
			48 08	61 10	
204	do	Canadian Department of Transport.	48 10	60 42	Northern limits of gulf ice.
			47 52	60 03	

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
205	Apr. 12	Cahadian Department of Transport.	Cabot Strait.....		Ice about 10 miles off east coast Cape Breton, extending to 40 miles south of Scatari Island.
206	Apr. 13	OSV Bravo.....	55 59	51 08	Berg.
207	do.....	U. S. C. G. cutter Matagorda.	56 49	42 14	Berg, 20 feet high, 60 feet long.
208	do.....	do.....	54 24	44 22	Berg, 40 feet high, 80 feet long.
			St. Paul Island to		
			46 55	60 00	
			to		
			46 21	58 04	
			to		
			46 00	58 45	
209	do.....	Canadian Department of Transport.	46 00	59 30	Outer limits of gulf ice.
			to		
			45 44	59 30	
			to		
			45 42	59 50	
			to		
			Scatari Island to		
			Cape Percy		
210	do.....	do.....	Cabot Strait.....		Loose drift, 20 miles, north of St. Paul Island.
211	do.....	Gardenia.....	45 39	59 25	Strings and patches dangerous to navigation.
212	do.....	Anguslake.....	45 42	57 44	Loose string of field ice.
213	Apr. 14	Gardenia.....	45 47	59 13	Edge of field ice.
214	do.....	U. S. C. G. LTS Bonavista, Newfoundland.	Cape Bonavista.....		Drift ice to limit of 10-mile visibility.
215	do.....	OSV Bravo.....	55 57	51 27	Berg.
			Cape Bonavista to		
			48 20	52 30	
216	do.....	Ice Patrol plane.....	to		Limits of Newfoundland field ice.
			49 15	52 15	
			thence northwest		
			53 10	55 00	
			to		
			53 15	54 30	
			to		
			52 20	53 45	
			to		
			53 20	53 50	
217	do.....	do.....	to		Limits of Labrador pack ice.
			53 40	53 28	
			to		
			54 48	54 32	
			to		
			55 05	56 50	
			thence north-northwest		
218	do.....	do.....	48 30	53 00	Berg.
219	do.....	do.....	48 50	52 48	Do.
220	do.....	do.....	48 52	52 20	Do.
221	do.....	do.....	49 00	52 53	Do.
222	do.....	do.....	49 05	52 30	Do.
223	do.....	do.....	52 42	54 05	Growler and berg.
224	do.....	do.....	53 37	54 57	3 bergs.
225	do.....	do.....	54 25	55 00	14 bergs within 25 mile radius.
226	do.....	do.....	55 00	56 45	8 bergs.
227	do.....	do.....	55 05	57 48	3 bergs.
228	do.....	do.....	55 15	57 25	18 bergs.
229	do.....	do.....	55 20	56 30	Berg.
230	do.....	do.....	48 58	52 30	Growler.
231	do.....	Gardenia.....	45 38	56 06	Edge of ice field.
232	do.....	Narsarsuaq AFB.....			Few growlers, bergs and little patches of ice in BW-1 fjord. Few scattered bergs in Tunugdliarfik Fjord. 2 large bergs, 1 small berg, seaward of BW-3. 2 small bergs and $\frac{3}{4}$ open pack ice in BW-3 fjord.
233	do.....	Canadian Department of Transport.	47 30	59 40	Loose drift ice.
234	Apr. 15	Ice Patrol plane.....	48 18	51 55	2 growlers.
235	do.....	do.....	48 20	52 58	Growler (same as no. 218).
236	do.....	do.....	48 35	52 30	Growler (same as no. 219).
237	do.....	do.....	48 42	51 45	2 growlers.
238	do.....	U. S. C. G. cutter Casco..	45 50	58 30	Approximate southeast limit of field ice.
239	do.....	do.....	58 35	45 35	Loosely packed pancake ice with some small growlers.
240	do.....	OSV Bravo.....	56 07	51 34	Berg.
241	do.....	U. S. C. G. LTS, Bonavista, Newfoundland.	Cape Bonavista.....		Field ice to horizon.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
242	Apr. 15	U. S. C. G. aircraft.....	49 55	54 00	Eastern limit Newfoundland pack. North pass Belle Isle Strait closed with consolidated pack ice.
243	do	Narsarsuak AFB.....	49 55	54 20	
			Cape Bauld		Few scattered bergs and growlers in BW-1 fjord.
244	do	Canadian Department of Transport.	St. Paul Island to 46 55 | 60 00	to 58 05	Outer edge loose drift ice.
			46 21 | 58 05	to 58 00	
			46 20 | 58 00	to 58 00	
			45 40 | 58 00	to vicinity Guion Island	
245	Apr. 16	OSV Bravo.....	56 10	51 46	Berg.
246	do	U. S. C. G. LTS, Bonavista, Newfoundland.	Cape Bonavista		Broken patches field ice.
247	do	Narsarsuak AFB.....			Small amount of ice in BW-1 fjord.
248	do	Canadian Department of Transport.	St. Paul Island to 46 30 | 59 10	to 57 45	Outer limits of Cabot Strait ice.
			46 20 | 57 45	to 57 40	
			45 46 | 57 40	to 52 55	
			49 20 | 52 55	to 52 55	
249	Apr. 17	Ice Patrol plane.....	48 55 | 52 55	to 51 35	Outer limits pack ice, consolidated pack north and west of Cape Bonavista, grading to open pack southeast of Cape Bonavista.
			48 55 | 51 35	to 52 05	
			48 05 | 52 05	to 52 58	
			48 05 | 52 58	to 53 00	
250	do	do	48 18 | 52 58		Berg.
251	do	do	48 21 | 53 00		Do.
252	do	do	48 28 | 51 43		Do.
253	do	do	48 28 | 52 22		Do.
254	do	do	48 48 | 53 00		Do.
255	do	do	48 15 | 53 08		3 growlers.
256	do	do	48 18 | 53 20		Growler.
257	do	do	48 25 | 52 20		2 growlers.
258	do	do	48 35 | 51 55		Growler.
259	do	do	48 40 | 52 10		3 growlers.
260	do	do	48 47 | 52 56		Growler.
261	do	do	48 56 | 52 03		Do.
262	do	U. S. C. G. LTS, Bonavista, Newfoundland.	Cape Bonavista		Broken field ice Cape Bonavista area.
263	do	OSV Bravo.....	55 55	52 09	Berg.
264	Apr. 18	U. S. C. G. LTS, Bonavista, Newfoundland.	Cape Bonavista		Broken field ice.
265	do	OSV Bravo.....	55 36	51 55	Large growler
266	do	Narsarsuak AFB.....			Few scattered bergs and growlers in BW-1 fjord. 3 large bergs with large amount open pack seaward of BW-3. 1 small berg, small amount pack ice in BW-3 fjord.
267	Apr. 19	OSV Bravo.....	55 20	51 51	Growler.
			Baccallien Island		
268	do	Ice Patrol plane.....	48 15 | 52 00	to 51 05	Outer limits Newfoundland pack ice.
			48 45 | 51 05	to 51 40	
			49 05 | 51 40	to 52 40	
			49 05 | 52 40	thence northwest	
269	do	do	48 20 | 52 30		5 bergs.
270	do	do	48 33 | 51 52		Berg.
271	do	do	48 36 | 51 35		Do.
272	do	do	48 38 | 51 15		2 growlers.
273	do	do	48 44 | 51 32		3 bergs and 1 growler.
274	do	do	48 54 | 51 43		Berg.
275	do	Canadian Department of Transport.	Cabot Strait		Scattered ice along the east coast of Cape Breton, from St. Paul Island to Scatarl Island.
276	Apr. 20	OSV Bravo.....	55 29	51 12	Berg.
277	Apr. 21	do	55 52	51 12	Berg. broken into numerous small pieces.
278	do	Narsarsuak AFB.....			Few scattered growlers and bergs in BW-3 fjord.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
279	Apr. 21	Canadian Department of Transport.	Cabot Strait	-----	Scattered strings and patches extend 30 miles offshore between Cape North and Ingonish and 10 to 15 miles offshore between Scatarl and Esprit.
280	Apr. 22	OSV Bravo	56 59	50 54	Growler, 7 feet high, 20 feet long.
281	do	U. S. C. G. cutter Evergreen.	49 24	50 30	2 small bergs.
282	do	do	49 24	50 42	Passed through 10 miles scattered field ice on south-southwest course.
283	do	do	49 12	50 54	2 small bergs.
284	do	Anguslake	46 30	59 45	Approximate center strong of ice 8 to 10 miles wide, 20 miles long running north-northwest to south-southeast.
285	do	U. S. C. G. cutter Evergreen.	49 24	50 41	Extensive field ice, lying west of line bearing 203°.
286	do	Ice Patrol plane	Baccalieu Island 48 10 to 52 00 49 10 to 50 20 49 10 to 51 30 thence northwest	-----	Limits Newfoundland pack.
287	do	do	48 06	52 24	Berg.
288	do	do	48 08	52 25	Do.
289	do	do	48 10	52 27	Do.
290	do	do	48 15	52 27	Do.
291	do	do	48 17	52 19	Do.
292	do	do	48 20	52 12	Berg (same as no. 271).
293	do	do	48 22	52 02	Berg.
294	do	do	48 23	51 59	Do.
295	do	do	48 25	52 20	Berg (same as no. 270).
296	do	do	48 50	50 35	Growler.
297	do	do	48 53	50 42	Do.
298	do	Canadian Department of Transport.	46 30	59 45	String of field ice 10 to 20 miles extending north-northwest and south-southeast.
299	do	do	46 25	59 28	Loose ice.
300	do	Trollafoss	48 50	50 09	Berg.
301	Apr. 23	Cap Fagnet	48 20	52 00	Broken ice accompanied by big berg.
302	do	Canadian Department of Transport.	Cabot Strait	-----	Few scattered strings, 4 miles off Guion Island.
303	Apr. 24	Narsarssuak AFB	-----	-----	Seaward of BW-3, 3/40 pack ice. In fjord 1/10 pack ice, few large bergs. In BW-3 harbor, 3 bergy bits, 7 growlers.
304	do	Canadian Department of Transport.	Gulf of St. Lawrence.	-----	Western edge of ice in Northumberland Strait, in a line from Cape Jouriman to Egmont Bay with all ice moving East.
305	do	OSV Bravo	57 06	49 05	Growler, 7 feet high, 50 feet long.
306	do	do	56 58	48 58	Berg, 40 feet high, 150 feet long.
307	Apr. 25	do	56 52	48 55	Berg.
308	do	Narsarssuak AFB	-----	-----	Seaward of BW-3, 23 large bergs, 1/10 pack ice. In BW-3 fjord, 1/10 pack ice. In BW-3 harbor, 2 bergy bits, small amount pack ice moving into harbor.
309	do	Ice Patrol plane	47 55	51 40	2 growlers.
310	do	do	48 05	51 35	Berg and 2 growlers.
311	do	do	48 15	51 45	Berg and 4 growlers.
312	do	do	48 15	52 02	Berg.
313	do	do	48 30	52 05	Berg and 5 growlers.
314	do	do	48 30	52 35	Berg and 2 growlers.
315	do	do	48 30	53 00	Growler.
316	do	do	48 40	51 35	3 growlers.
317	do	do	48 45	49 15	Do.
318	do	do	48 48	53 09	Growler.
319	do	do	48 50	50 30	Berg and 3 growlers.
320	do	do	49 15	50 55	Growler.
321	do	do	49 20	53 20	3 bergs and 2 growlers.
322	do	do	49 30	53 40	2 bergs and 4 growlers.
323	do	do	49 35	53 15	10 growlers.
324	do	do	49 37	52 35	3 bergs.
325	do	do	49 40	51 50	3 growlers.
326	do	do	49 55	53 52	Growler.
327	do	do	49 56	53 08	Berg.
328	do	do	50 10	52 28	Growler.
329	do	do	50 30	52 30	Do.
330	Apr. 26	OSV Bravo	56 48	48 54	Berg split into 2 pieces and numerous growlers.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
331	Apr. 26	Narsarsuak AFB.	o /	o /	Seaward of BW-3, 10 bergs (large), 15 small bergs, large amount of pack ice. BW-3 harbor. 2 bergy bits, 4 growlers, 1/10 pack ice.
			Cape Freels to 48 20 | 52 00 to 48 37 | 51 28 to 48 25 | 51 10 to 48 05 | 51 40 to 48 00 | 49 00		
332	do.	Ice Patrol plane	48 40 | 49 00 to 50 00 | 52 30 to 50 20 | 54 30 to 50 30 | 52 10 to 51 55 | 52 00 thence north- westward		Outer limits of Newfoundland pack ice, with consolidated pack south of 50°00' N. and west of 52°00' W. Loose strings east of 52°00' W. Open pack north of 50°00' N. and west of 54°00' W. Loose strings east of 54°00' W.
333	do.	do.	47 59	51 57	2 bergs and 5 growlers.
334	do.	do.	48 00	52 20	4 growlers.
335	do.	do.	48 10	51 33	Do.
336	do.	do.	48 18	51 33	2 growlers.
337	do.	do.	48 22	50 53	Growler.
338	do.	do.	48 36	50 37	Do.
339	do.	do.	48 38	50 16	4 growlers.
340	do.	do.	48 50	50 07	Growler.
341	do.	do.	Area within 10 miles east and north of Cape Freels.		6 growlers.
342	do.	do.	10 miles southeast Cape Fogo.		5 growlers.
343	do.	do.	49 53	53 52	3 growlers.
344	do.	do.	50 12	51 55	Berg.
345	do.	do.	50 37	52 00	6 growlers.
346	do.	do.	50 43	52 54	Growler.
347	do.	do.	50 57	54 11	2 growlers.
348	do.	do.	51 05	52 15	Growler.
349	do.	do.	51 09	54 16	3 growlers.
350	do.	do.	51 23	54 14	5 growlers.
351	do.	do.	51 37	54 15	Growler.
352	do.	do.	51 54	54 18	2 bergs and growler.
353	do.	do.	51 55	52 02	2 growler.
354	do.	do.	52 12	52 55	2 bergs and 3 growlers.
355	do.	do.	52 14	53 21	4 bergs and growler.
356	do.	Canadian Department of Transport.	Gulf of St. Lawrence.		Patch of soft ice in vicinity Cape North and Scatari Island. String 8 miles long at 46°00' N. and 58°36' W. Considerable loose ice in Northumberland Strait and Strait of Canso.
357	Apr. 27	Ryholm.	48 17	48 44	Growler.
358	do.	do.	48 18	48 56	Several small growlers.
359	do.	OSV Bravo.	56 29	51 00	Large growler.
360	do.	do.	56 29	51 13	Small growler.
361	do.	Ryholm.	48 09	49 04	Do.
362	do.	Imperial Goderich.	46 30	59 33	String of loose drift ice approximately 1 mile wide extending northwest-southeast to limit of visibility.
363	do.	Canadian Department of Transport.	Cabot Strait.		String of loose drift ice 1 mile wide at 46°30' N. 59°33' W. extending northwest-southeast to visual limits (same as No. 362).
364	Apr. 28	Aircraft.	52 30	50 00	In 50-square-mile area, 5 medium-sized bergs in line generally northwest-southeast on east side of large area scattered pack.
365	do.	Anguslake.	46 20	58 11	Loose ice north to visual limits and 5 miles south.
366	do.	Uruguay.	48 25	49 15	Several growlers and large area of field and pack ice covering an area of approximately 10 square miles. Many outlying smaller growlers.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
367	Apr. 28	Oslo Fjord.....	48 30	49 18	Numerous growlers and small bergs and area of field ice.
368	do	do	48 18 47 53	49 43 50 27	Field of broken ice and growlers in triangle.
369	do	Ice Patrol plane	47 48	50 32	Line of bergs and growlers in a general east and west line; patches of pack ice.
370	do	do	47 47 47 45	50 48 50 30	Patch of closed pack ice 10 miles in diameter with 4 growlers on east and north edge, loose string extending to east
371	do	do	47 46 and	51 00 to	Rectangle with 8 bergs and 15 growlers extending generally east-west.
372	do	Canadian Department of Transport.	48 04	52 20	Small ice pack off Flint Island. Loose ice near 46°20' N. 58°11' W.
373	Apr. 29	Aircraft (MO 409)	52 15	51 30	Berg.
374	do	do	52 20	51 30	Do.
375	do	do	52 30	51 30	Do.
376	do	Ice Patrol plane.	Newfoundland		Close pack ice appeared to extend from Cape Bonavista eastward with loose strings to 40°30' N. 51°30' W. to 47°50' N. 49°45' W. to 47°50' N. 48°10' W. thence northwestward.
377	do	do	47 45	47 59	Small berg.
378	do	do	47 47	48 38	5 growlers within 5 miles.
379	do	do	47 48	49 03	Growler.
380	do	do	47 55	49 10	4 growlers.
381	do	do	47 57	49 23	Small berg.
382	do	do	47 57	51 15	Patch of close pack 5 miles in diameter with loose strings extending to eastward.
383	do	do	47 55 and	50 55 to	4 bergs and 16 growlers within rectangle.
384	do	do	48 10	52 30	Growler.
385	do	do	48 02	49 48	Berg and growler.
386	do	do	48 07	47 48	Growler.
387	do	do	48 12	48 03	Do.
388	do	do	48 18	47 48	Berg.
389	do	do	48 29 48 30	52 35 52 15	Do.
390	do	Oklahoma	47 50	49 01	Several large growlers and loose pieces of ice.
391	do	do	47 55 48 15	48 20 47 45	Large growler.
392	do	Narsarssuak AFB			Seaward of BW-3 5/10 pack ice, few large bergs. BW-3 fjord 5/10 pack ice. BW-3 harbor 37 growlers, scattered brash.
393	do	Makefjell.	48 15	49 40	Small berg.
394	do	Canadian Department of Transport.	46 20	59 30	Patches of scattered ice.
395	Apr. 30	Roomaghead	47 50	48 27	3 small growlers.
396	May 1	Narsarssuak AFB			Seaward of BW-3, close pack ice to horizon, few small bergs. BW-3 fjord 5/10 pack ice. BW-3 harbor, 1 bergy bit, 5/10 pack ice.
397	May 2	Elysia	47 58	49 35	Growler.
398	do	Hydro., Wash.	Greenland area.		Vast concentrations ice at Melville Bay and Cape York.
399	do	Ice Patrol Plane	Cape St. Charles to Cape Fogo.		Field ice not heavily consolidated extended in band off coast about 35 miles from shore.
400	do	do	52 20 51 00 50 40 50 20	54 20 53 20 54 40 54 30	Extreme eastern limits of open pack.
401	do	do	50 25 thence southward	53 50	Clear of ice except for 25 bergs at east entrance and pack ice and many bergs extending 70 miles to eastward.
402	do	do	15 miles east of Cape Fogo.		3 bergs and 3 growlers.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
402	May 1	Ice Patrol Plane	Within 10 miles of Cape Fogo.		9 bergs.
404	do	do	49 50	54 30	15 bergs within 15-mile radius.
405	do	do	49 50	55 20	4 large bergs within 10 miles.
406	do	do	49 53	53 40	2 bergs and 4 growlers within 5 miles.
407	do	do	50 10	53 50	1 berg and 2 growlers.
			50 00	54 40	
408	do	do	50 00 to 51 35	55 10 to 55 25	70 bergs and many growlers in this rectangle.
409	do	do	51 35	54 50	2 growlers.
410	do	do	50 35	54 05	12 bergs and many growlers within 10 miles.
411	do	do	50 55	54 15	6 bergs and 10 growlers within 10 miles.
412	do	do	51 10	54 00	4 growlers.
413	do	do	51 30	53 22	6 growlers within 10 miles.
414	do	do	51 45	53 55	
415	do	do	51 55	54 05	65 bergs and many growlers within these limits.
416	do	do	51 35	54 20	15 bergs.
417	do	do	Southeast entrance Strait of Belle Isle.		10 bergs.
418	do	Aircraft (PHTDL)	52 04	53 26	Berg.
419	do	Narsarsuak AFB	49 27	51 30	2 bergs.
420	May 3	OSV Brave	56 20	50 50	Seaward BW-3, loose pack to horizon, 9 small bergs, 4 growlers. BW-3 fjord, $\frac{3}{4}$ open pack. BW-3 harbor, $\frac{3}{4}$ pack, 1 growler.
421	do	Terr Head	47 56	48 15	Large berg.
422	do	Agne	47 58	48 28	6 growlers within these limits.
423	do	Ice Patrol plane.	48 30	48 40	Berg.
424	do	do	47 57	52 35	Do.
425	do	do	47 59	52 40	Do.
426	do	do	48 05	49 12	3 small growlers.
427	do	do	48 05	49 28	Growler.
428	do	do	48 17	52 40	Do.
429	do	do	48 28	49 31	Berg.
430	do	do	48 35	49 45	Do.
431	do	do	48 35	52 30	Growler.
432	do	do	48 40	51 21	Berg and 2 growlers.
433	do	do	48 41	52 13	Berg and growler.
434	do	do	48 43	51 45	Growler.
435	do	do	48 48	52 04	Berg.
436	do	do	48 49	52 40	Do.
437	May 4	Canadian Department of Transport.	Cabot Strait.		Ice strings 5 miles southwest St. Paul Island.
438	do	OSV Bravo	56 38	51 43	Berg.
439	do	Krageholm	Cabot Strait.		Very small growler, 10 miles 060° from Cape North.
440	May 5	U. S. C. G. cutter Eastwind.	Strait of Belle Isle.		Belle Isle to 40 miles northeast $\frac{3}{4}$ increasing to $\frac{3}{4}$ coverage broken floes with scattered bergs. 64 bergs counted.
441	do	Sommen	48 34	52 46	Berg.
442	do	do	48 43	52 46	Do.
443	do	do	48 47	52 42	Do.
444	do	do	48 57	52 47	Do.
445	do	do	48 55	53 04	Do.
446	do	do	49 02	53 10	Do.
447	do	do	49 04	53 16	Berg with several bergs and growlers north of this position.
448	May 6	U.S.C.G. cutter Eastwind	Belle Isle to 53 15	52 30	BW-1 fjord, few scattered bergs. Seaward. BW-3, pack ice within range of visibility. BW-3 harbor, $\frac{3}{4}$ scattered pack.
449	May 8	Narsarsuak AFB			Close pack $\frac{3}{4}$ coverage, many bergs extend in northeasterly direction from Belle Isle, to 115 miles east of Seal Islands, Labrador.
					BW-1 fjord, few scattered bergs. BW-3 fjord, large amount pack ice. BW-3 harbor, 1 berg, 6 growlers, $\frac{3}{4}$ pack ice.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
450	May 9	Belfri.....	48 07	47 41	Edge of radar ice. Large berg. BW-1 harbor; few scattered bergs. Field of heavy ice, approximately 15 miles long, 3 miles wide, extending from Amet Sound to Pietou Island. Radar targets suspected to be ice. Seaward of BW-3, $\frac{1}{2}$ pack ice. BW-fjord, $\frac{1}{2}$ pack ice. BW-3 harbor, 4 growlers, very small amount brash. Growler. Do. 2 growlers. Several growlers on beach near Catalina Harbor. Growler.
451	do.	OSV Bravo.....	48 00	47 08	
452	do.	Narsarssuak AFB.....	57 24	51 55	
453	do.	Canadian Department of Transport.....			
454	May 10	Birmingham City.....	45 34	49 08	Cape Bonavista.....
455	May 12	Narsarssuak AFB.....			
456	May 13	Ice Patrol plane.....	48 38	52 21	
457	do.	do.....	48 39	52 05	
458	do.	do.....	48 45	52 56	Cape Bauld to 51 45 | 55 04 thence north-northeast.
459	do.	do.....			
460	May 14	USN Aircraft.....	48 18	52 12	
461	do.	Ice Patrol plane.....	51 45	55 04	
462	do.	do.....	49 40	54 40	3 bergs and 2 growlers on beach within 6 miles.
463	do.	do.....	49 58	54 51	3 growlers within 4 miles.
464	do.	do.....	51 57	55 06	Very broad, long, low berg, $\frac{1}{4}$ mile by $\frac{1}{2}$ mile and 40 feet high.
465	do.	Narsarssuak AFB.....			Seaward of BW-3, $\frac{1}{2}$ pack ice. BW-3 fjord, $\frac{1}{2}$ pack ice. BW-3 harbor, small amount pack ice.
466	May 15	do.....			Few scattered patches of ice in BW-1 fjord.
467	May 16	Canadian Department of Transport.....	Gulf of St. Lawrence.		Strip of ice along coast in Northumberland Strait.
468	do.	Narsarssuak AFB.....			BW-1 fjord, few scattered patches. Seaward of BW-3, $\frac{1}{2}$ pack ice. BW-3 fjord, 1 small berg, $\frac{1}{2}$ pack ice. BW-3 harbor, $\frac{1}{2}$ pack ice.
469	do.	Ice Patrol plane.....	East coast of Newfoundland.		4 bergs, 7 growlers extending alongshore on north shore of Trinity Bay.
470	do.	do.....	48 25 | 52 56		Berg.
471	do.	do.....	Cape Bonavista.		Berg and 2 growlers.
472	do.	do.....	East coast of Newfoundland.		Approximately 45 bergs and many growlers extending from shore, 15 miles north of Fogo Island to 12 miles east Cape Freels.
473	do.	do.....	do.		Limit of pack extends along south shore of Strait of Belle Isle to Cape Norman, thence to 5 miles south of Belle Isle thence northeast. Head of White Bay filled with open pack.
474	do.	do.....	Cape Bonavista.		Berg, 5 miles to North.
475	do.	do.....	Bonavista Bay.		Berg and 2 growlers along north shore.
476	do.	do.....	Cape Freels.		9 bergs and many growlers within 10 miles.
477	do.	do.....	Notre Dame Bay.		8 bergs along south shore.
478	do.	do.....	Fogo Island.		Approximately 12 bergs and many growlers within 10 miles north.
479	do.	do.....	White Bay.		9 bergs and many growlers.
480	do.	do.....	Belle Isle.		20 bergs along coast from Groas Island to Cape Bauld.
481	do.	do.....	Strait of Belle Isle.		55 bergs and many growlers in eastern entrance.
482	do.	do.....	do.		14 bergs and many growlers.
483	May 17	do.....	Cape Bauld to 51 40 | 53 50 to 52 15 | 53 50 to Belle Isle		8 bergs and 16 growlers within these limits.
484	do.	do.....	Strait of Belle Isle.		
485	May 19	Narsarssuak AFB.....			Many bergs and growlers in pack ice north and west of a line running northeastward from Belle Isle.
486	do.	Ice Patrol plane.....	51 20 | 55 30 to 52 00 | 52 30 to 54 30 | 52 40 to 55 00 | 56 00 thence northwest		BW-1 fjord, few scattered bergs. Seaward of BW-3, $\frac{1}{2}$ close pack ice. BW-3 fjord, $\frac{1}{2}$ pack ice. BW-3 harbor, $\frac{1}{2}$ pack ice. Outer limits of pack ice.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
487	May 19	Ice Patrol Plane.....	o / 51 45	o / 53 30	Blocked with close pack. This is a lane of open water. Ice to west of this lane and south of 54°00' N., is heavy consolidated pack, containing about 75 bergs and many growlers. Ice to east of this lane and south of 54°00' N., grades from slush on eastern edge to close pack and contains about 30 bergs.
488	..do..	..do..	52 30 53 00 53 50	to 53 30 55 00 55 20	
489	..do..	..do..	Labrador coast.....		Between 54°00' N. and 55°00' N. pack contains about 70 bergs and is consolidated west of 54°30' W. Some leads extend 30 miles toward Labrador coast from northeastern edge. BW-1 fjord, few scattered bergs.
490	May 20	Narsarsuak AFB.....			Seaward of BW-3, 3/4 open pack ice, few small bergs. BW-3 fjord, 3/4 open pack ice. BW-3 harbor, small amount of brash.
491	May 21	..do..			
492	May 22	Umanak.....	58 38	43 40	Polar ice.
493	May 23	Ice Patrol plane.....	Notre Dame Bay.....		Scattered heavy pieces and strings of field ice western part. 5 bergs in bay.
494	..do..	..do..	Cape St. John.....		Widely scattered heavy pieces of ice.
495	..do..	..do..	White Bay.....		Loose to close pack heavy field ice. Some large pans and heavy floes. 10 bergs along coast.
496	..do..	..do..	21 miles offshore and extending from 51 25 50 50	57 30 to 58 40	Large field very open ice, except for strings in passage containing some very heavy pieces and pans.
497	May 24	Narsarsuak AFB.....			Seaward BW-3, 12 small bergs, 3/4 open pack ice. BW-3 fjord, 3/4 open pack ice. BW-3 harbor, very small amount of scattered brash.
498	..do..	U. S. C. G. Cutter Half Moon.....	52 30 53 15 51 20 51 30 52 05 51 30 52 20 53 00	51 40 to 51 40 55 30 to 54 30 to 54 20 to 53 50 to 53 24 to 51 30	2 bergs and considerable pack ice.
499	..do..	Ice Patrol plane.....			Limit of pack ice. Pack is consolidated for about 40 miles off coast of Labrador. Easternmost pack ice is large strings of drift ice.
500	..do..	..do..	Cape Freels.....		From 10 miles north to 10 miles east, 25 bergs and many growlers.
501	..do..	..do..	Cape St. John.....		3 bergs, aground.
502	..do..	..do..	Bell Island.....		4 bergs, 6 growlers, aground along east coast.
503	..do..	..do..	White Bay to Cape Bauld.....		Many bergs and growlers along north shore.
504	..do..	..do..	Groas Island.....		4 bergs along east coast.
505	..do..	..do..	51 18 | 54 50		Growler.
506	..do..	..do..	Cape Bauld.....		From Cape Bauld to 20 miles east, 14 bergs and many growlers.
507	..do..	..do..	Between Cape Bauld, Belle Isle and Cape Nor- man.....		20 bergs and many growlers.
508	..do..	..do..	Strait of Belle Isle.....		10 bergs and many growlers.
509	..do..	..do..	..do..		10 bergs and many growlers in northeast entrance.
510	..do..	..do..	51 34 | 54 00		2 growlers.
511	..do..	..do..	Belle Isle.....		10 bergs and many growlers within 15 miles to east.
512	..do..	..do..	North of 52°00' N. and west of 54°00' W.....		Many bergs and growlers in pack ice.
513	..do..	..do..	52 20 | 51 30		Berg and growler.
514	..do..	..do..	52 28 | 53 21		Berg.
515	..do..	..do..	52 30 | 53 38		Large berg.
516	..do..	..do..	52 42 | 52 02		Berg.
517	..do..	..do..	52 47 | 53 35		Do.
518	..do..	..do..	52 50 | 53 15		Do.
519	..do..	..do..	52 54 | 53 50		Do.
520	..do..	..do..	52 55 | 52 25		Do.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
521	May 25	Ice Patrol Plane.....	Hamilton Inlet to 64°00' N.		Report of ice of Bafinland and Labrador coast.
522	May 26	.....do.....	Baffin Bay.....		Report of ice of Baffinland coast to Cape York, Greenland.
523	...do....	Aircraft.....	51 10 to 51 00 to 52 10	55 40 to 55 00 to 53 20	Southern limit of pack ice.
524	...do....	Narsarsuak AFB.....			BW-1 fjord, scattered ice. Seaward of BW-3, 9 large bergs, 7 small bergs, $\frac{3}{10}$ open pack ice. BW-3 fjord, $\frac{3}{10}$ open pack ice. BW-3 harbor, $\frac{2}{10}$ open pack ice, small amount of scattered brash.
525	May 27	.....do.....			Seaward of BW-3, $\frac{3}{10}$ open pack ice, few small bergs. BW-3 fjord, $\frac{3}{10}$ open pack ice. BW-3 harbor, $\frac{3}{10}$ open pack ice.
526	May 28	Nikos.....	Between Peckford Island and Cape Freels.		14 bergs, 2 growlers, and many small pieces of ice.
527	May 29	USMATS aircraft.....	59 10	42 40	Large berg.
528	...do....	.....do.....	59 08	43 50	Large flat berg.
529	...do....	.....do.....	58 57	44 48	Large berg.
530	May 31	U. S. Army vessel LT 136..	51 26	54 01	Berg.
531	June 1	U. S. N. vessel.....	50 19	53 12	Do.
532	...do....	Caxton.....	48 50	52 45	Radar contact, probable berg.
533	...do....	.....do.....	49 11	53 18	7 bergs within 4 miles.
534	...do....	.....do.....	49 18	53 16	Berg.
535	...do....	.....do.....	49 21	53 26	Do.
536	...do....	.....do.....	49 22	53 36	2 bergs.
537	...do....	.....do.....	49 24	53 44	Large flat top berg, 1,000 feet long, 140 feet high.
538	...do....	.....do.....	Vicinity Fogo Island.		5 bergs and numerous growlers on south side within 7 miles radius of White Island.
539	...do....	.....do.....	do		White Island to Goose Island, few isolated bergs and growlers.
540	...do....	.....do.....	do		Goose Island to Smoker Island, north side, 3 large bergs and few growlers.
541	...do....	U. S. A. F. aircraft.....	48 10	53 30	Berg.
542	...do....	Ice Patrol plane.....	Hare Bay, Newfoundland to 52 30	52 40	Limit of pack ice.
543	...do....	.....do.....	thence north Trinity Bay to Cape Bonavista.		1 berg and 4 growlers grounded along north shore.
544	...do....	.....do.....	Cape Freels to Fogo Island.		Approximately 36 bergs and growlers.
545	...do....	.....do.....	50 00	54 00	Berg and radar target.
546	...do....	.....do.....	51 42	50 40	Radar target.
547	...do....	.....do.....	51 50	51 30	Berg, 2 growlers and radar target.
548	...do....	.....do.....	52 08	51 30	2 bergs and 4 growlers.
549	...do....	.....do.....	52 20	51 40	Growler and 3 radar targets, with many radar targets extending to north-northwest.
550	...do....	.....do.....	52 26	52 43	Growler and 3 radar targets.
551	June 3	Hydro, Wash.....	51 30	54 00	Berg.
552	...do....	.....do.....	51 23	53 18	Bergy bits.
553	...do....	.....do.....	51 35	53 50	Cake ice.
554	...do....	Aircraft.....	50 10	53 03	Large berg.
555	...do....	.....do.....	Fogo Island		Berg 10 miles north of Fogo Island.
556	...do....	U. S. N. vessel.....	53 00	54 54	Close pack ice.
557	June 4	.....do.....	53 00	54 48	Do.
558	...do....	Aircraft.....	60 49	42 00	Berg.
559	...do....	Royal Dutch Airlines plane.	54 35	56 10	Medium sized berg.
560	June 5	PATRON 23.....	Hopedale Harbor.		Ice shore fast $\frac{1}{10}$ coverage with widening cracks.
561	...do....	.....do.....	Turnavik to Grey Island.		Belt 10 to 20 miles wide $\frac{1}{10}$ to $\frac{3}{10}$ coverage of brash, blocks, small and medium floes with many small bergs.
562	...do....	Caxton.....	49 34	55 05	Field ice and growlers.
563	...do....	.....do.....	49 41	54 50	Very many growlers within 10-mile radius.
564	...do....	.....do.....	49 58	54 06	Very large berg and growlers.
565	...do....	.....do.....	49 59	53 50	Berg.
566	...do....	.....do.....	49 55	53 45	Do.
567	June 6	TCA plane.....	49 10	53 39	2 large bergs.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° / ' 50 50 to 51 40 to 52 40	° / ' 55 30 54 10 54 00	
568	June 6	Ice Patrol plane.....			Outer limits of close pack ice.
569	do	do.....	thence north Within 20 miles radius of Fogo Island.		12 bergs.
570	do	do.....	50 13	53 23	Berg.
571	do	do.....	50 20	52 49	Small berg.
572	do	do.....	51 10	49 53	Small growler.
573	do	do.....	51 23	49 45	Do.
574	do	do.....	51 40	54 00	2 bergs.
575	do	do.....	52 00	50 45	Growler.
576	do	do.....	52 02	51 11	Do.
577	do	do.....	52 10	52 45	2 growlers.
578	do	do.....	52 08	54 11	3 bergs.
579	do	do.....	52 20	51 10	4 radar targets, probable growlers.
580	do	do.....	52 25	52 50	Berg and 7 growlers.
581	do	do.....	52 25	53 45	3 bergs and 8 growlers.
582	do	do.....	52 40	52 10	Berg and 2 growlers.
583	do	do.....	52 50	53 10	Growler.
584	do	do.....	52 50	53 50	2 bergs.
585	do	Thors Isle.....	50 00	52 55	3 bergs and 2 growlers.
586	June 7	Aircraft.....	49 30	53 35	Berg.
587	June 8	U. S. C. G. cutter Sorrel.....	52 02	55 05	Scattered field ice.
			51 20	55 30	
588	June 12	Ice Patrol plane.....	51 35 to 51 35	54 40 to 54 40	Outer limits of field ice.
589	do	do.....	thence northeast 49 05	52 45	3 bergs.
590	do	do.....	49 35	53 28	Berg.
591	do	do.....	50 05	53 01	2 radar targets, possible growlers.
592	do	do.....	50 40	43 15	Do.
593	do	do.....	51 05	51 38	1 radar target, possible growler.
594	do	do.....	51 40	53 50	15 radar targets, probable bergs.
595	do	do.....	52 02	51 25	2 stationary radar targets.
596	June 13	PATRON 23.....	Labrador Coast.....		Comprehensive report of coastal ice.
597	June 14	U. S. C. G. cutter Barataria.....	52 42	51 21	Growler.
598	do	do.....	52 10	51 22	Do.
599	June 15	MATS aircraft.....	Between Belle Isle and Twillingate, Newfoundland.		Large number of bergs.
600	do	PATRON 23.....	Baffin Bay.....		Comprehensive ice report.
601	do	Hydro, Wash.....	50 40	53 22	Large berg.
602	June 19	do.....	62 49	53 05	Do.
603	June 20	Esso Burlington.....	49 30	53 35	Berg.
604	do	do.....	49 31	53 35	Do.
605	do	do.....	49 34	53 32	Do.
606	do	Hydro, Wash.....	50 50	53 37	Large berg.
607	June 23	Ragna Gorthon.....	51 57	49 50	Berg.
608	June 24	Hydro, Wash.....	62 42	56 15	Radar target, probable berg.
609	do	do.....	62 55	54 09	Large berg.
610	do	do.....	63 02	56 20	3 bergs.
611	June 25	Aircraft.....	49 08	53 18	Berg.
612	do	do.....	49 10	53 26	Do.
613	do	do.....	49 20	53 16	Do.
614	June 27	do.....	51 45	50 18	Do.
615	July 2	Hydro, Wash.....	51 10	50 00	Large berg.
616	do	do.....	51 15	50 11	Do.
617	do	do.....	51 15	50 20	Do.
618	do	do.....	51 22	50 09	Do.
619	July 4	do.....	52 01	51 05	Berg.
620	do	do.....	53 17	51 30	Numerous bergs.
621	July 7	do.....	Belle Isle Strait.....		Belle Isle Strait reported navigable except for scattered bergs and growlers.
622	July 9	Kaitaki.....	48 49	44 24	Small growler.
623	July 11	Hydro, Wash.....	50 12	53 22	Several bergs.
624	do	Belgian Aircraft Selbina.....	52 12	53 22	Berg.
625	July 14	Gil Eannes.....	51 50	50 30	Radar target believed to be large berg.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North	West	Description
			latitude	longitude	
			° /	° /	
626	July 16..	U. S. C. G. Cutter Evergreen.	51 50	52 26	Berg.
627	do.....	do.....	51 52	52 16	Do.
628	do.....	do.....	51 54	52 33	Do.
629	do.....	do.....	51 56	52 32	Do.
630	do.....	do.....	51 57	52 30	Do.
631	do.....	do.....	52 05	52 54	Do.
632	do.....	do.....	52 29	53 31	Do.
633	do.....	do.....	52 29	54 01	Do.
634	do.....	do.....	52 31	53 19	Do.
635	do.....	do.....	52 36	53 42	Do.
636	do.....	do.....	52 36	53 44	Do.
637	do.....	do.....	52 44	54 22	Do.
638	do.....	do.....	52 45	53 27	Do.
639	do.....	do.....	52 52	54 08	Do.
640	do.....	do.....	52 54	54 22	Do.
642	July 17	do.....	53 11	54 58	Do.
641	do.....	do.....	53 11	55 15	Do.
643	do.....	do.....	53 14	54 55	Do.
644	do.....	do.....	53 32	54 54	Do.
645	do.....	do.....	53 33	55 31	Do.
646	do.....	do.....	53 48	55 25	Do.
647	do.....	do.....	53 52	55 57	Do.
648	do.....	do.....	53 57	56 07	Do.
649	do.....	do.....	54 01	55 59	Do.
650	do.....	do.....	54 04	55 42	Do.
651	do.....	do.....	54 32	54 01	Do.
652	do.....	do.....	54 35	54 12	Do.
653	do.....	do.....	54 39	54 18	Do.
654	do.....	do.....	54 44	54 25	Do.
655	do.....	Hydro, Wash.	54 55	56 05	Line of bergs 10 miles wide.
656	July 18	do.....	51 48	51 10	7 bergs.
657	July 21	Lawrence Victory	53 00	52 00	Bergs, 2 growlers.
658	July 22	Hydro, Wash.	51 01	55 30	Large berg.
659	do.....	do.....	Labrador coast.....		Numerous bergs at intervals of 5 to 10 miles from Hamilton Inlet to Belle Isle.
660	July 23	U. S. C. G. Cutter Evergreen.	51 21	52 04	Berg.
661	do.....	do.....	51 24	52 14	Do.
662	do.....	do.....	51 42	52 06	Do.
663	do.....	do.....	51 43	52 39	Do.
664	do.....	do.....	51 45	52 38	Do.
665	do.....	do.....	52 20	51 07	Do.
666	do.....	Aircraft	51 05	50 45	1 large berg, 2 bergs.
667	do.....	do.....	49 53	53 00	Berg.
668	do.....	U. S. C. G. Cutter Castle Rock.	50 45	48 06	3 large bergs, numerous growlers.
669	July 24	Hydro, Wash.	55 30	59 30	Many small bergs.
670	July 25	do.....	48 52	45 21	Radar target.
671	do.....	Aircraft	51 36	51 39	Small growler.
672	July 26	do.....	50 35	54 50	Large berg.
673	do.....	Hydro, Wash.	50 35	54 14	Do.
674	do.....	do.....	51 00	54 04	Small berg.
675	July 28	U. S. C. G. Cutter Casco	50 05	53 09	Large berg.
676	do.....	do.....	50 54	51 38	1 berg, 4 growlers.
677	do.....	do.....	50 58	51 29	Berg.
678	do.....	do.....	52 02	51 22	2 small bergs.
679	do.....	Carol Victory	51 09	50 46	Large berg.
680	do.....	U. S. C. G. aircraft	49 15	53 15	Berg.
681	do.....	do.....	50 06	52 25	Do.
682	do.....	do.....	50 30	52 44	Do.
683	do.....	do.....	50 57	51 43	Do.
684	do.....	do.....	50 59	50 37	Growler.
685	do.....	do.....	51 00	51 33	Berg.
686	do.....	do.....	51 05	50 44	Do.
687	do.....	do.....	51 06	51 27	Growler.
688	do.....	do.....	51 07	51 26	Do.
689	do.....	do.....	51 11	50 34	Do.
690	do.....	do.....	51 23	50 35	Berg.
691	do.....	do.....	51 27	50 26	Growler.
692	do.....	do.....	51 32	50 01	Do.
693	do.....	do.....	51 32	53 03	Berg.
694	do.....	do.....	51 39	52 01	Do.
695	do.....	do.....	51 42	52 32	Growler.
696	do.....	do.....	51 51	51 03	Do.
697	July 29	Hydro, Wash.	50 55	50 49	Berg.
698	do.....	do.....	52 50	50 22	Large berg.
699	do.....	do.....	53 25	52 15	Do.

TABLE OF ICE REPORTS, 1952—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
700	July 30	Aircraft.....	Belle Isle	Strait....	Pack of bergs west of Belle Island. Also numerous large bergs along east coast of Northeast Newfoundland from 50-30N to Cape Bauld.
701	---do---	PANAM 122.....	51 08	51 53	Berg.
702	---do---	---do---	51 10	51 53	2 bergs.
703	Aug. 1	Aircraft.....	54 07	55 47	Large berg.
704	---do---	---do---	54 37	55 47	4 bergs.
705	Aug. 2	BOAC aircraft.....	50 02	50 33	Large berg.
706	---do---	Graculus.....	51 09	49 03	1 berg and 2 growlers.
707	---do---	KLM aircraft.....	50 04	50 36	Large berg.
708	Aug. 5	Hydro, Wash.....	59 45	46 50	2 bergs.
709	---do---	USCG aircraft.....	49 52	50 17	Growler.
710	---do---	---do---	49 56	53 24	Berg.
711	---do---	---do---	50 07	52 41	Do.
712	---do---	---do---	51 03	51 53	Do.
713	---do---	---do---	51 18	53 10	Do.
714	---do---	---do---	51 32	53 35	Do.
715	Aug. 6	---do---	49 32	50 12	Small berg.
716	Aug. 7	SAS aircraft.....	50 15	52 45	3 bergs.
717	---do---	Waltham Victory.....	53 45	51 29	Berg.
718	---do---	---do---	54 39	51 28	Do.
719	---do---	---do---	54 40	51 48	Do.
720	Aug. 10	Hydro, Wash.....	49 42	51 30	Do.
721	Aug. 11	MATS aircraft.....	52 21	51 54	Do.
722	Aug. 16	Hedberg.....	52 34	51 25	Do.
723	---do---	USCG aircraft.....	50 03	53 32	Do.
724	---do---	---do---	50 23	52 52	Do.
725	---do---	OSV Bravo.....	52 07	52 36	Large bergs.
726	---do---	U. S. C. G. cutter Mendota.....	53 08	52 06	Large berg.
727	Aug. 17	U. S. N. S. Gen. W. G. Haan.....	54 35	54 19	Do.
728	---do---	Hydro, Wash.....	52 14	55 24	Berg.
729	Aug. 19	Cleopatra.....	53 28	53 06	Do.
730	---do---	Hydro, Wash.....	56 00	60 00	Widely scattered bergs.
731	Aug. 22	Aircraft.....	54 10	52 30	2 small bergs.
732	Aug. 23	Ivicta.....	54 39	54 45	Large berg.
733	Aug. 27	Hydro, Wash.....	53 00	51 00	Do.
734	Aug. 31	---do---	54 19	56 02	Berg.
735	Sept. 2	Scandinavian aircraft.....	Deadman's Bay, Cape Frels, Newfoundland.	53 22	2 bergs probably grounded.
736	Sept. 3	Delillan.....	52 09	53 22	Large berg and numerous small pieces.
737	---do---	BOAC aircraft.....	54 55	58 08	Large berg.
738	---do---	Burnhope.....	52 57	51 25	Berg and 3 growlers.
739	Sept. 6	Hydro, Wash.....	50 00	51 00	Berg.
740	---do---	Aircraft.....	50 15	49 30	Large berg.
741	Sept. 7	Hydro, Wash.....	51 45	55 55	Berg.
742	---do---	---do---	54 15	55 39	Do.
743	---do---	---do---	54 33	56 06	Large berg.
744	Sept. 9	PANAM Clipper 121.....	49 30	50 50	Berg.
745	---do---	USCG aircraft.....	49 35	50 51	Berg (same as No. 744).
746	---do---	Hydro, Wash.....	51 35	56 15	Small berg.
747	Sept. 13	Graculus.....	49 30	50 50	Several bergs.
748	Sept. 30	Lawrence Victory.....	55 38	58 19	Large berg.
749	Oct. 2	Hydro, Wash.....	52 16	55 22	Berg.
750	---do---	U. S. C. G. LTS Battle Harbor.....	52 00	55 45	Do.
751	Oct. 11	U. S. C. G. cutter Sorrel.....	52 08	55 34	Large berg moving southwest down Belle Isle Strait.
752	Oct. 12	Sandsend.....	52 35	51 22	Large berg.
753	Oct. 14	Hydro, Wash.....	53 55	54 47	Do.
754	Oct. 15	OSV Bravo.....	58 52	42 23	Berg.
755	Oct. 16	Glauekauf.....	59 21	44 56	2 large bergs.
756	---do---	---do---	59 39	44 01	Do.
757	Oct. 22	Franconia.....	51 40	56 17	Berg.
758	---do---	Ragna Gorthan.....	50 17	49 35	Large berg.
759	Oct. 30	Beaverford.....	51 24	57 04	Berg.

PHYSICAL OCEANOGRAPHY OF THE GRAND BANKS REGION AND THE LABRADOR SEA IN 1952¹

By Floyd M. Soule, Senior Physical Oceanographer, U. S. Coast Guard

During 1952 the U. S. Coast Guard 180-foot tender-class cutter *Evergreen* served as oceanographic vessel of the ice patrol, as it has since 1948. The only major change affecting the oceanographic work, made since the 1951 season, was the lowering of the laboratory room temperature. This was accomplished by increasing the heat insulation of the bulkheads and deck and the installation of an air-conditioning unit. The rapid circulation of drier, cooler air has made possible better temperature control of the salinity bridge but has resulted in increased evaporation of salinity samples during the time their containers are open. The importance of this increased evaporation has not yet been determined.

The field work for the 1952 season began with the departure of the *Evergreen* from Argentia on the evening of 31 March for the first survey. The unusual absence of both berg and sea ice from the Grand Banks region obviated the necessity for surveying the area immediately adjacent to the more southerly steamer lanes and provided an opportunity for studying the waters farther to the north. The area immediately northward of the northeastern shoulder of the Grand Banks and Flemish Cap was free of sea ice, as was also the Bonavista triangle. If bergs subsequently moved south it would be useful to have a knowledge of the current system in this area. The Bonavista triangle is usually covered, at least in part, by sea ice until May. Very little information has been available regarding the northward flowing outer margins of the North Atlantic eddy north of Flemish Cap and no measurements had been made at this time of year. It was considered improbable that the Labrador shelf would remain free of sea ice across its complete width for the expected duration of the survey. The survey was planned, in the light of these considerations, to include the Bonavista triangle and a network of stations between it and Flemish Cap with the survey extended northward by a series of sections approximately normal to the coast and extending from the outer edge of the shelf to an eastern limit some 200 miles seaward of the continental slope.

The work of collection of data, encompassing 127 stations beginning with station 4614, began at the latitude of Flemish Cap on 1 April and

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was completed at about the 54th parallel on the early morning of 21 April. The *Evergreen* then returned to Argentia, arriving there on 23 April. During the survey it was necessary to heave to on account of weather twice, once for 13¼ hours on 12 to 13 April, and again for 14 hours on 17 to 18 April.

The *Evergreen* departed from Argentia on the afternoon of 28 April to begin the second survey. While the first survey covered many aspects of interest it could not also cover the early season current pattern in the area immediately east and south of the Grand Banks. The second survey was designed to get this, in addition to a small area of overlap with the first survey between 47° and 48° N., and to extend the surveyed area seaward far enough to delineate the outer boundary of Atlantic Current water in the sector southeastward of the Grand Banks. To accomplish this 100 stations were occupied, beginning with station 4741, between noon on 29 April and the morning of 12 May. The work of collection progressed from north toward south and was not interrupted by the weather. Upon conclusion of this work the *Evergreen* proceeded to 41°43' N., 50°05' W., where a carboy of surface water was collected for subsequent use as a substandard of salinity. The *Evergreen* then proceeded to Boston, arriving there on the evening of 15 May.

Toward the end of May the presence of some bergs in the Labrador Current just north of the Grand Banks made it seem desirable to get another current survey of the Grand Banks region. The *Evergreen* therefore returned to Argentia and departed there on the morning of 3 June to repeat the pattern of the second survey. The work of collection began at noon on 4 June with station 4841, and progressing from north toward south, was completed at station 4940 early on the afternoon of 16 June. It was not necessary to heave to on account of gales at any time during the survey, although the average speed was reduced by the high percentage (40 percent) of fog. Upon completion of the survey the *Evergreen* proceeded to Boston with arrival there on the evening of 19 June.

A postseason cruise was made to repeat the occupation of the Bonavista triangle and the section across the Labrador Sea from South Wolf Island, Labrador, to Cape Farewell, Greenland. This was accomplished with the occupation of 54 stations. The *Evergreen* departed from Boston on 7 July and from Argentia on 11 July and the work of collection of data at the triangle began on the evening of 12 July and was completed 3 days later. Work on the section across the Labrador Sea began on the early morning of 17 July and was concluded within the outer edge of a coastal belt of ice 12½ miles off Cape Farewell on the evening of 20 July. No gales were encountered. The *Evergreen* then proceeded via Argentia to Woods Hole where oceanographic equipment and personnel were discharged on the evening of 27 July to conclude the field work for 1952.

The oceanographic work was under the supervision of Oceanographer Floyd M. Soule United States Coast Guard who was assisted by Lt. Robertson P. Dinsmore, U. S. C. G., Lt. Rudolph E. Lenczyk, U. S. C. G. and Lt. Jay H. Bramson, U. S. C. G. Other assistants in the observational work were Francis N. Brown, yeoman second class; Lewis M. Lawday, aerographer's mate, second class; Donald M. McGill, aerographer's mate, third class; Hugh R. McCartney Jr., aerographer's mate, third class; and Joseph R. Stefanick, seaman, all United States Coast Guard.

Of the 381 stations occupied during the season and postseason cruises, the 24 stations comprising the section across the Labrador Sea were occupied from the surface to as near bottom as was practicable, and at the remaining 357 stations the observations extended to a depth of about 1,500 meters where the depth of water permitted. As in previous years the intended depths of observation, in meters, were 0, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1,000, and thence by 500-meter intervals. For the first survey, the dynamic topography of the southern shallower part has been referred to the 1000-decibar surface and the northern deeper part has been referred to the 1500-decibar surface. The results have been presented in two charts having sufficient overlap to provide continuity in their interpretation. The 1,500-decibar surface has been used for reference in the section across the Labrador Sea. For all other stations the dynamic heights have been referred to the 1,000-decibar surface.

In addition to the usual measurements of temperature and salinity, 696 samples during the second cruise, and 288 samples during the postseason cruise, were taken for ultimate determination of total phosphorus concentration.

Temperatures were measured with deep sea reversing thermometers. Most of the protected thermometers were of Richter and Wiese manufacture but a small percentage were manufactured by Negretti and Zambra, G. M. Manufacturing Co., and the Kahl Scientific Instrument Corp. The depths of observation were based on Richter and Wiese unprotected thermometers. The thermometers were used in pairs. The thermometers were shifted periodically so that a thermometer eventually was paired with several other thermometers thus providing rather extensive intercomparison. This program permitted recognition of those thermometers which were not functioning properly and also permitted a determination of consistent errors in the scale correction in use. The series of intercomparisons provided means of estimating the precision of the temperature measurements. Considering 2,458 comparisons the probable difference between the corrected readings of a pair of thermometers was $\pm 0.012^{\circ}$ C. As many of the thermometers had recent laboratory comparisons with thermometers tested by the National Bureau of Standards, and as in most cases the temperatures are the means of the corrected readings of a pair of

thermometers, it is considered that the observed temperatures listed in the table of oceanographic data have a probable error of $\pm 0.01^{\circ}\text{C}$.

Salinities were determined, as in previous years, with a Wenner salinity bridge. Standardizations were made with water from an oil-sealed carboy of sea water. At least twice during each salinity run a sample of Copenhagen standard water of the batch P18 was measured as an unknown. At the end of each survey these measurements of standard water were used to correct all salinities determined during the survey. Indicated corrections thus obtained were less than $0.005^{\circ}/\text{‰}$ for the three surveys made during the season and so no correction was made. The salinities determined during the postseason cruise were corrected to Copenhagen water for each run. The precision of the salinity bridge measurements was about $\pm 0.005^{\circ}/\text{‰}$. Since the calibration curve of the bridge was determined by silver nitrate titration, however, the accuracy of the salinities is no better than that of the latter method. As all samples from any one station were measured in the same salinity run any errors of standardization should not affect differences in salinity from level to level at a given station. Thus any cases of apparent instability arising from differences in salinity of more than $0.01^{\circ}/\text{‰}$ are considered to be real. It is of interest to note that several such cases of slight instability were found in 1952 in the intermediate water of the Labrador Sea. This water has usually been found to be of slight or indifferent stability.

The dynamic topography found during the first survey has been shown on two charts: figure 7 in which the heights of the sea surface have been referred to the 1,500-decibar surface and which covers the northern part of the surveyed area; and figure 8 in which the heights of the sea surface have been referred to the 1,000-decibar surface and which covers the southern part of the surveyed area. For the sake of continuity there is an area in which the two charts overlap. The 1,000-decibar surface, which is adequate for the Grand Banks region and preferable in view of the large proportion of shallow water stations there, is not deep enough for the Labrador Sea where the 1,500-decibar surface more nearly approximates the surface of no motion.

The area shown in figure 7 has infrequently been surveyed in summer and has never before been surveyed in April. There is, then, no basis for comparison to judge whether or not the current pattern found is unusual. That the seaward margin of the Labrador Current is found near the continental slope is to be expected from summertime observations. The northern limits of the North Atlantic eddy are inferred to have been located at about 55°N ., and therefore are approximately in the same latitude found in summer. It was a surprise to find such large gradients in dynamic height as are shown in the western margins of the northward moving water. As indicated by figure 7, the water of most pronounced Atlantic characteristics was found at station 4724 where the salinities reached values above $35^{\circ}/\text{‰}$ with a maximum of

35.15. The meanders which have been found to characterize the outer margin of the North Atlantic eddy in the Grand Banks region are also present, at least as far north as 53° N., in figure 7.

Reference to figure 8 indicates that practically none of the Labrador Current was following the western branch along the Avalon Peninsula. Nearly all of the eastern branch appears to have been diverted northward without getting south of the latitude of Flemish Cap.

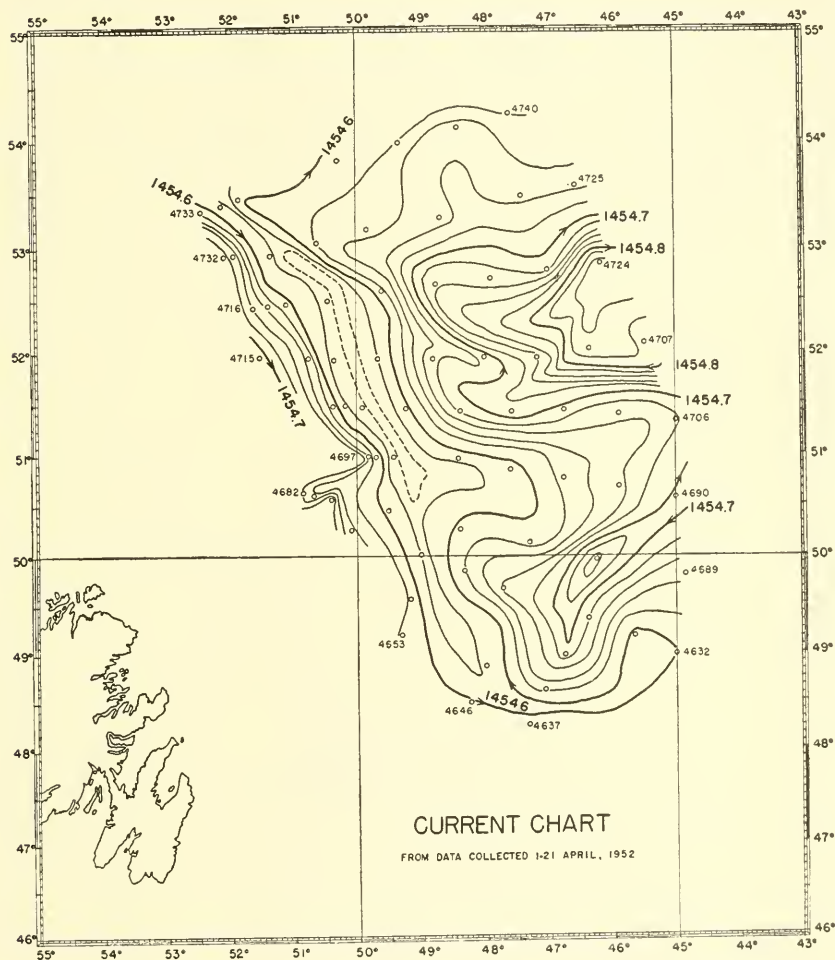


FIGURE 7.—Dynamic topography of the sea surface relative to the 1,500-decibar surface in the northern part of the area covered by the first survey, 1 to 21 April 1952. Oceanographic station positions are indicated and the station numbers given at turning points.

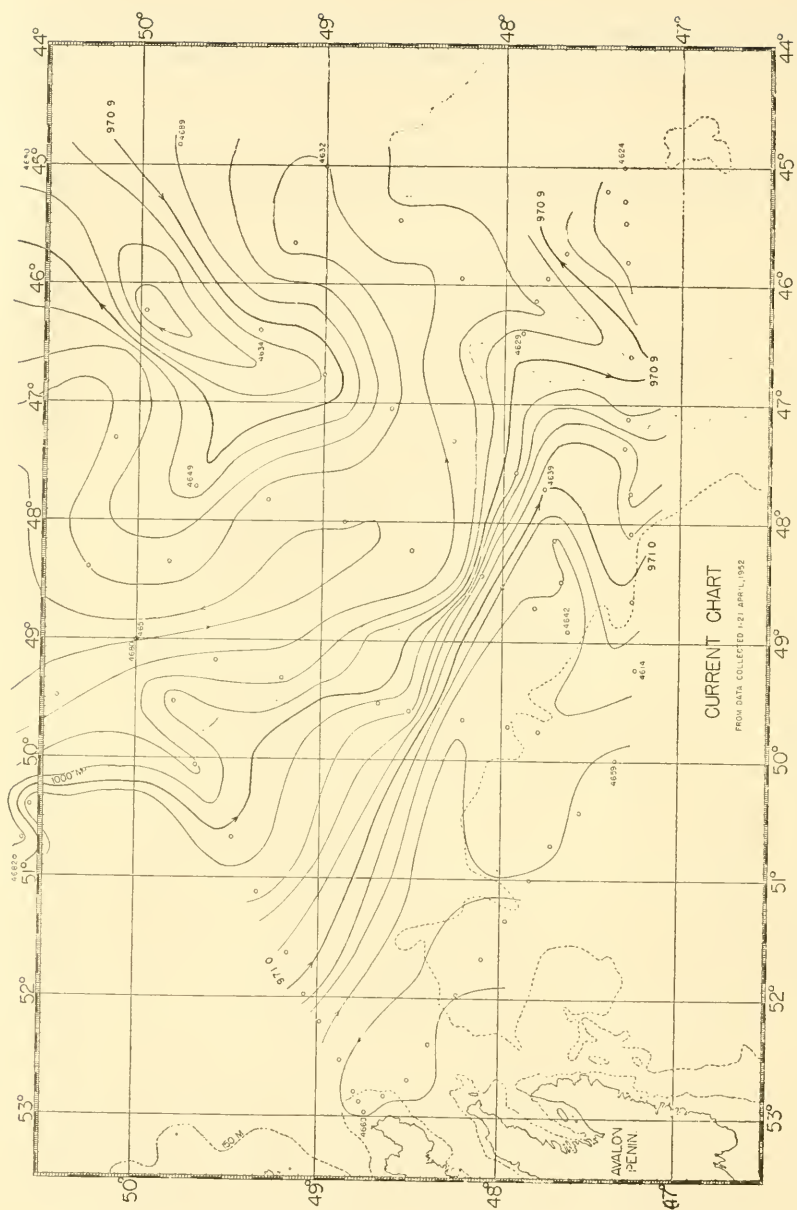


FIGURE 8.—Dynamic topography of the sea surface relative to the 1,000-decibar surface in the southern part of the area covered by the first survey, 1 to 21 April 1952. Oceanographic station positions are indicated and the station numbers given at turning points.

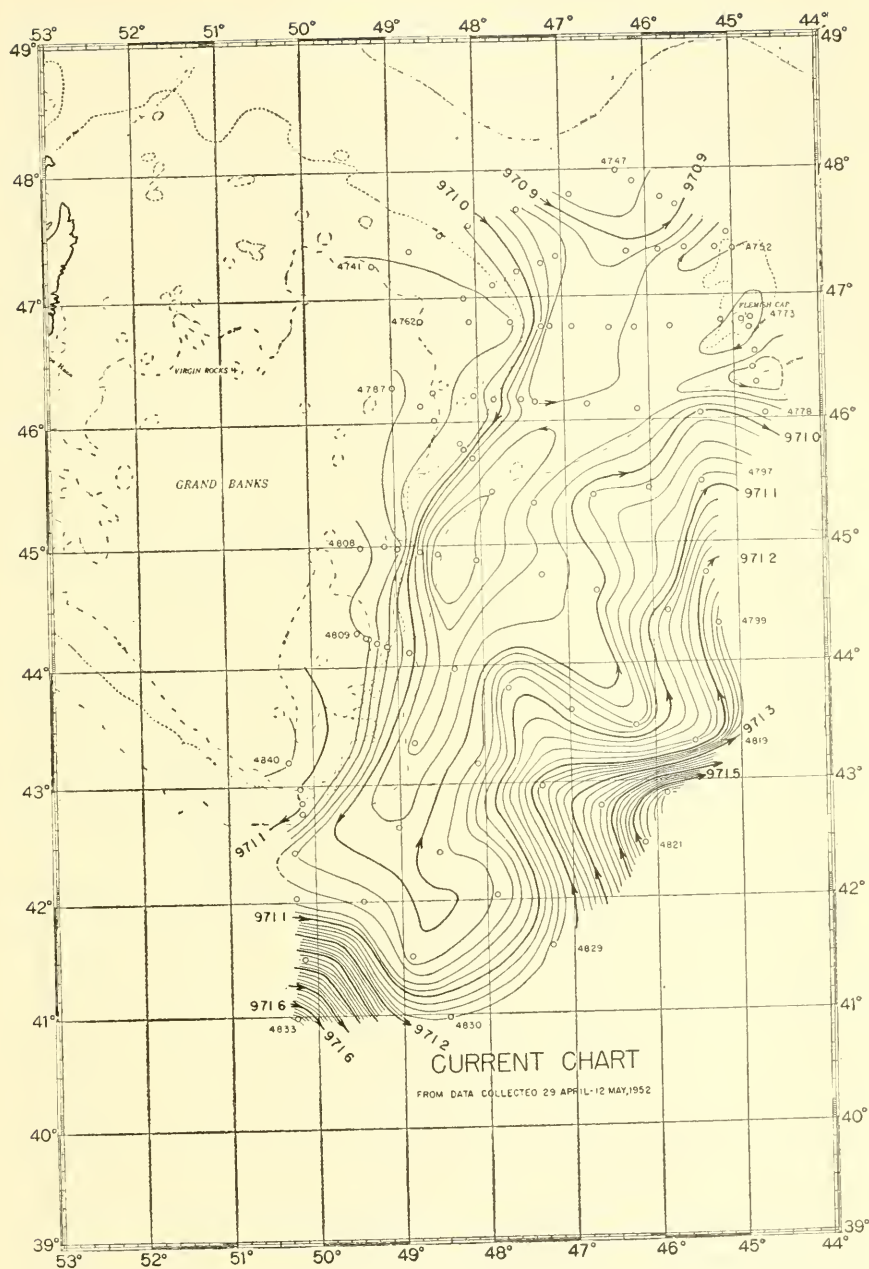


FIGURE 9.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 29 April to 12 May 1952. Oceanographic station positions are indicated and the station numbers given at turning points.

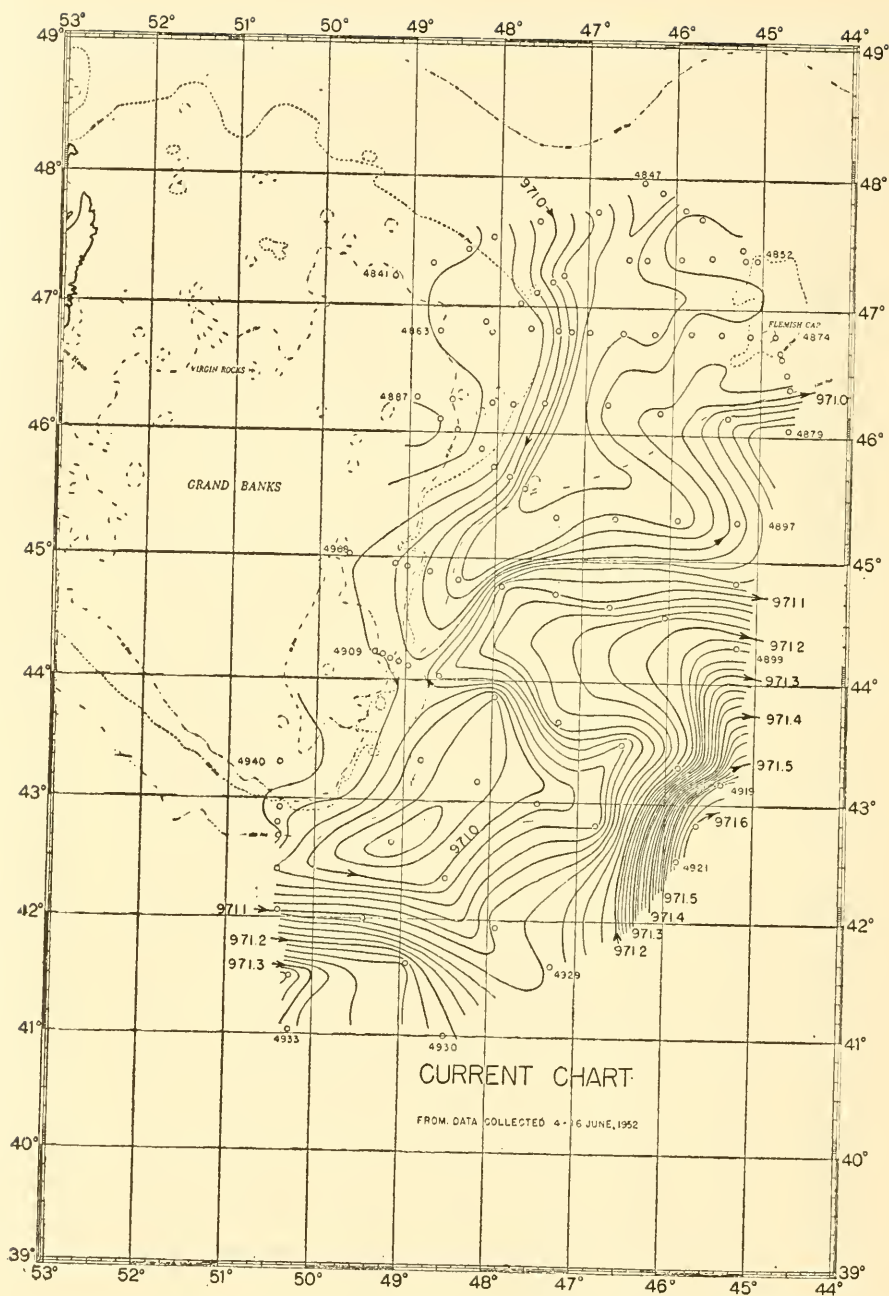


FIGURE 10.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 4 to 16 June 1952. Oceanographic station positions are indicated and the station numbers given at turning points.

Figures 9 and 10 show the dynamic topography of the sea surface relative to the 1,000-decibar surface found during the second and third surveys. The area covered in each of these surveys was the same and has a small area between 47° and 48° N., in which it overlaps that covered by the first survey. While the period covered by the observations of the second cruise (14 days) is somewhat longer than normal for a current survey of the Grand Banks, adjacent sections were as nearly synoptic as is ordinarily the case. The area of overlap shows little change between the first and second surveys. Not only were the surface velocities of the Labrador Current subnormal but in the valley between the Grand Banks and Flemish Cap the Labrador Current was especially weak at depths greater than about 400 meters. The dynamic topography is remarkably flat between 46° and 47° N., from the eastern edge of the Labrador Current eastward to Flemish Cap. Had bergs been present to enter the surveyed area via the Labrador Current from the north, the circumstances were such that if they arrived at the 47th parallel coincident with strong westerly winds they might have crossed this area of weak steady currents to get into positions of hazard near the 46th parallel in and east of the longitude of Flemish Cap. While the Labrador Current was weak it was possible for bergs to reach the Tail of the Banks. From this position there would have been little likelihood of them getting farther west than about the 51st meridian, and the locality in which they might have penetrated farthest into the steamer lanes was the relatively cold mixed water pool which extended southeastward nearly to 41° N., between 48° and 49° W.

Comparison of figure 10 with figure 9 shows the changes which took place during the 5-week interval between the second and third surveys. North of $45^{\circ}30'$ N., and west of 47° W., there was little change in the pattern and the principal change here was an increase of about 20 percent in the surface speed. East of 47° W., the area of very quiet water was replaced by a more active movement of mixed water returning northward. South of $45^{\circ}30'$ N., the most striking feature was the westward incursion of the salient associated with the Atlantic Current, and the recurving of practically all of the Labrador Current north of the 44th parallel. This left the colder mixed water southeastward of the Tail of the Banks circulating in a closed eddy. It is to be noted that although the dynamic height of the highest point in the edge of the Atlantic Current, in the southeastern margin of the survey, was very nearly the same and in the same position in the third survey as in the second survey, the difference in height between 41° N., and 42° N., at 50° W., was materially less than that found during the second survey.

Considered as a progressing meander, the salient of Atlantic Current water showed a northward rate of progression during the interval between the second and third surveys of about the same order of mag-

nitude as in the cases of other meanders which have been charted from time to time. It is, of course, difficult to make an accurate estimate of the distance moved but the rate of progression of this meander would seem to have been about 2 or 3 miles per day whereas others have usually moved about 4 miles per day in this part of the area.

The volume of flow, mean temperature and heat transport of the Labrador Current have been determined for each of 19 sections occupied during the 1952 season and postseason cruises. Some of these sections have been occupied in other years and in the case of three sections, T, U, and W, numerous occupations in earlier years have provided a rough approximation to seasonal normals. The locations of sections T, U, and W are as follows: Section T extends southeasterly from about $46^{\circ}20' \text{ N.}$, $49^{\circ}00' \text{ W.}$; section U extends eastward from the Grand Banks at about the 45th parallel; and section W extends southward from the Grand Banks at about the 50th meridian. The tentative normal seasonal variations in the Labrador Current at these sections have been given in bulletin number 36 of this series. Although little is known of the seasonal variation in the Labrador Current off South Wolf Island, Labrador, this section has been occupied once during each of 15 summers between 1928 and 1952 and average values at this section have been used for comparison with the results obtained in 1952. An insufficient number of earlier occupations of the Bonavista triangle sections and sections F, G, and H, intermediate between the triangle and Flemish Cap, are available for derivation of even average values for these sections.

Values found in 1952 are summarized in table 1 in which they are compared with such normal values as are available. In this table, as well as in the following discussion the volume transport is given in millions of cubic meters per second, the mean temperature and minimum observed temperature are given in degrees centigrade, and the heat transport is given in millions of cubic meter degrees centigrade per second.

It will be noted that the volume of flow of the Labrador Current in the Grand Banks region was subnormal in both the second and third surveys with the largest anomaly occurring at section W. The partial recovery at section T between the second and third surveys was accompanied by a larger diversion of this water southward of that section. This diversion, accomplished by the salient of Atlantic Current water also showed up in the mean temperature in which the anomaly changed from negative to positive values. The minimum temperatures were not as cold as normal in either survey.

Northward of Flemish Cap there was an increase in volume of flow at section G between the first and second surveys and very little change between the second and third surveys. The volume transport across the northwest section of the Bonavista triangle showed a marked increase between the first cruise and the post-season cruise, although

Table 1.—SUMMARY OF VELOCITY SECTIONS ACROSS LABRADOR CURRENT OCCUPIED IN 1952

Section	Volume transport			Mean temperature			Minimum observed temperature			Heat transport		
	1952	Normal	Anomaly	1952	Normal	Anomaly	1952	Normal	Anomaly	1952	Normal	Anomaly
First survey:	2.77			0.78			-1.73			2.16		
NW-----	0.20 (N.E.)			-1.34			-1.52			-0.26 (N.E.)		
SW-----	3.56			1.42			-1.20			5.08		
SE-----	3.32			1.09			-1.13			3.63		
H-----	0.79			1.02			-0.96			0.81		
G-----												
Second survey:	1.97			1.20			-1.02			2.36		
G-----	2.42			1.93			-0.94			4.66		
F-----	1.76	3.43	-1.67	1.28	1.83	-0.55	-1.11	-1.36	+0.25	2.25	6.28	-4.03
T-----	4.40	4.63	-0.23	1.73	2.08	-0.35	-0.74	-1.16	+0.42	7.61	9.63	-2.02
U-----	1.38	4.12	-2.74	1.06	2.95	-1.89	-0.43	-0.50	+0.07	1.46	12.15	-10.69
W-----												
Third survey:	1.89			2.12			-1.39			4.01		
G-----	2.19			2.00			-0.99			4.38		
F-----	2.47	2.68	-0.21	2.01	1.83	+0.18	-1.48	-1.55	+0.07	4.98	4.90	+0.08
T-----	1.63	3.53	-1.90	4.97	2.23	+2.74	-1.04	-1.22	+0.18	9.43	7.87	+1.56
U-----	0.45	4.16	-3.71	3.47	3.48	-0.01	-0.37	-0.50	+0.13	1.56	14.48	-12.92
W-----												
Postseason:	5.31			0.76			-1.63			4.03		
NW-----	0.48			-1.47			-1.61			-0.70		
SW-----	4.36			1.12			-1.54			4.90		
SE-----	6.37	4.40	+1.97	2.63	2.48	+0.15	-1.68			16.76	11.53	+5.23
South Wolf Island												

the mean temperature remained constant. At South Wolf Island the Labrador Current had a volume of flow nearly 50 percent greater than average, continuing the large values of volume transport which have been found there each year since and including 1949. The mean temperature at this section has been warmer than average and constant at 2.63° during each of the last 3 years. This would seem to give some weight to the speculation that more of the waters of the Labrador Sea recently have been brought into the closed circulation around its margins.

Considering the volumes of flow past the three sections of the Bonavista triangle, if there is no significant vertical motion across the reference surface the sum of the volume transports entering the triangle should equal the sum of the transports leaving the triangle. The figures for the April occupation showed a discrepancy of about a half-million cubic meters per second and it is presumed that some change occurred during the period covered by the observations in spite of the good agreement between the two occupations of the station at the northeastern corner made at the beginning and end of the 3-day period of observations. The discrepancy was again about a half-million cubic meters per second for the figures obtained from the July occupation. In each case practically all of the current was following the eastern branch. For each occupation the dynamic topography at 100 decibars showed a pattern similar to that at the sea surface. Figure 11 shows the dynamic topography of the sea surface in the Bonavista triangle found during the postseason cruise.

In the Grand Banks region Labrador Current water and Atlantic Current water are present as water masses having characteristic temperature-salinity relationships. Usually, in addition, the mixed water formed from those water masses has a sufficiently uniform proportion of each to be considered as a virtual water mass. The T-S relationships found for these three water masses during the second and third surveys of 1952 have been examined and curves representing them are shown as solid lines in figure 12. The curves shown as broken lines give the relationships representing the means for the 8-year period 1934-41. The two sets of curves are of much the same shape for the Labrador Current water and the mixed water. There is a notable difference, however, between the 1952 conditions and the 8-year mean in the Atlantic Current water. Level for level the Atlantic Current water was lighter in 1952 than the mean, and the salinity minimum which occurs at a temperature of about 6° C in the mean curve was absent in 1952 and was only hinted at by a bulge occurring at a temperature of about 5° C. Although the 1952 curves for the mixed water and the Labrador Current water are similar in shape to the mean curves, the former at all levels and the latter at the deeper levels show lighter than mean densities because of decreases in salinity.

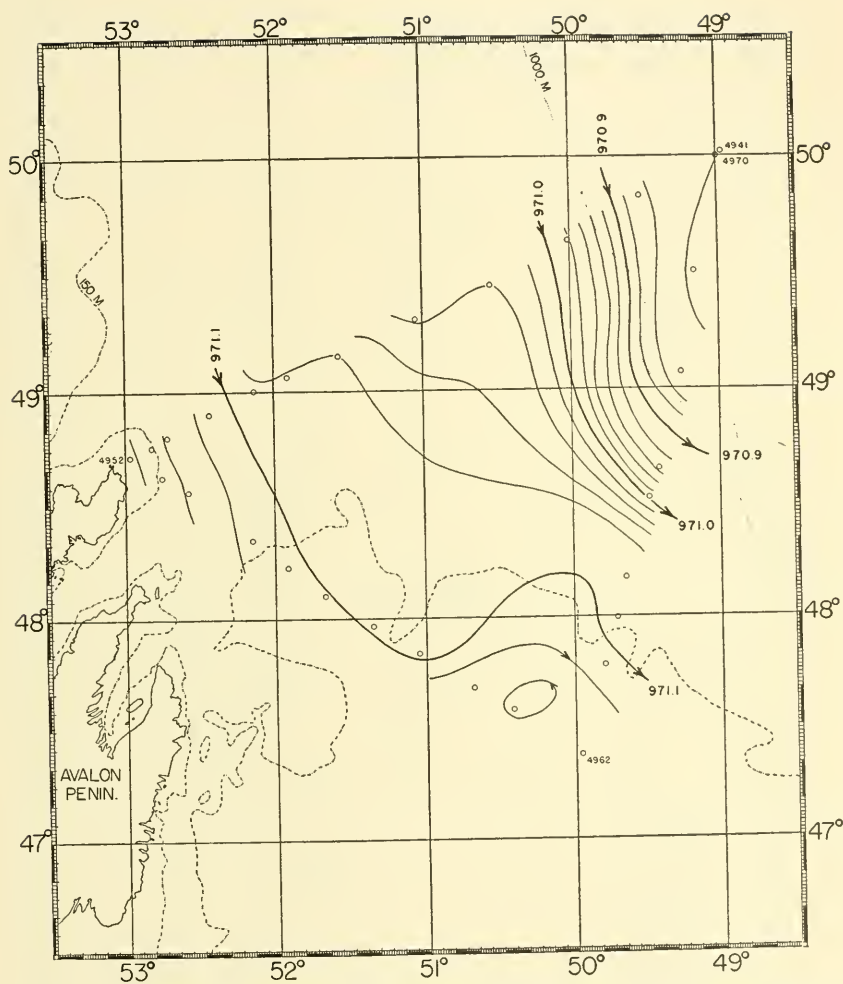


FIGURE 11.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 12 to 15 July 1952. Oceanographic station positions are indicated and the station numbers are given at turning points.

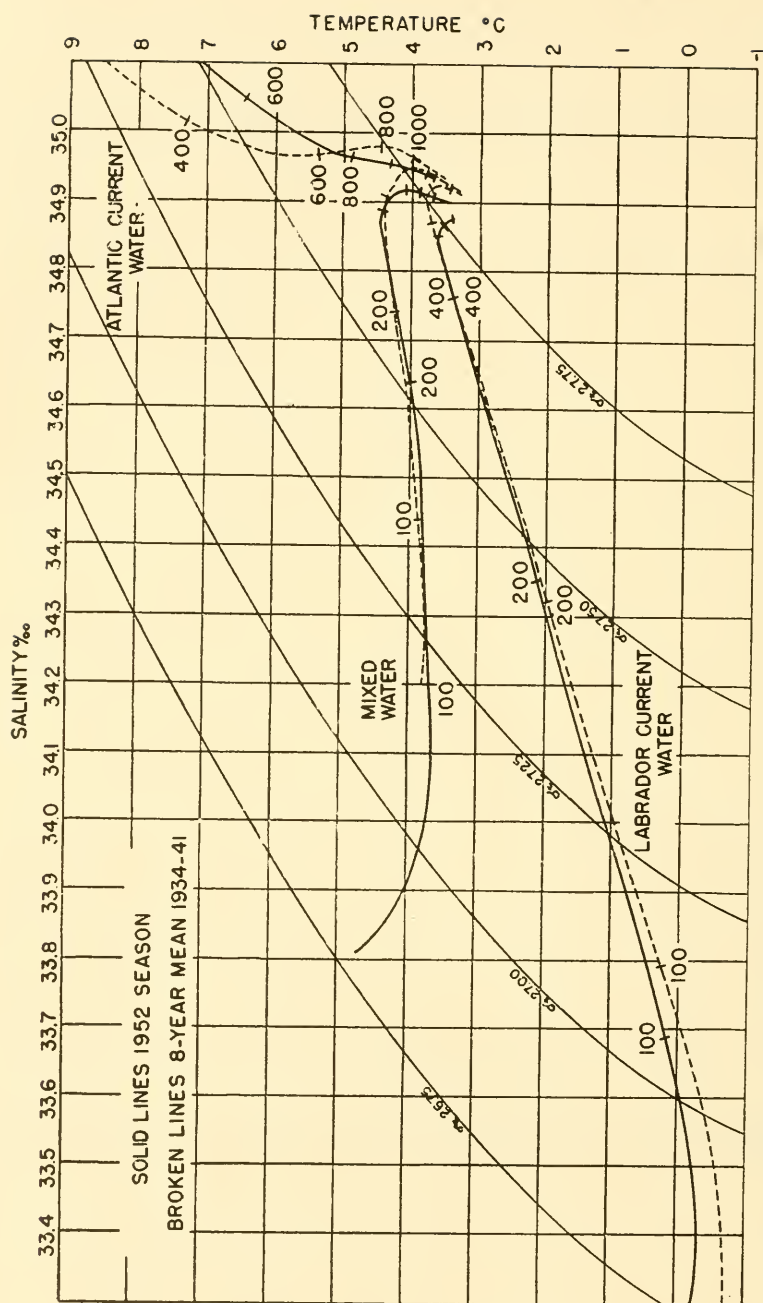


Figure 12.—Temperature-salinity relationships for Labrador Current water, Atlantic Current water, and mixed water found in the Grand Banks region. Solid lines show conditions during the 1952 season and broken lines represent the 8-year mean for the period 1934-41. An approximate depth scale in meters is given.

After the stations occupied during the second survey had been classified as to water mass, samples of water from a few stations selected as typical Labrador Current water and typical Atlantic Current water were analyzed for total phosphorus concentration by personnel of the Woods Hole Oceanographic Institution. If differences in total phosphorus can be used to trace water masses it would seem that these two water masses, having such widely different origins, might be expected to show characteristic differences if any exist. These preliminary measurements showed an encouraging difference. Since there was very little overlapping range of either temperature or salinity in the two water masses, the concentration of total phosphorus was plotted against σ_t . Whereas the Labrador Current water all had about the same concentration of total phosphorus, in the Atlantic Current water samples measured the phosphorus had low values in the lighter water, increased to a maximum at intermediate densities and then decreased toward the steady concentration characteristic of the Labrador Current water. The preliminary results were sufficiently encouraging to warrant the analysis of additional samples collected. This work is now in progress and will be reported upon when complete.

The water of the North Atlantic eddy is characteristically warm and the Labrador Current water and the mixed water are colder. In crossing from the warm water to the cold water the transition is abrupt and at the sea surface the change is so striking that this steep horizontal temperature gradient has been called the "cold wall". The melting of ice will of course proceed at a greater rate in the warm water than in the cold water. The location of this transition zone is consequently of importance in determining the boundary of the area which is ice infested. If, as is the case, this transition zone is not stationary, the prediction of the location of the boundary of the ice infested area must embody the prediction of the location of the transition zone in depths of the order of magnitude of the draft of an iceberg. Its location at the sea surface may be different from its location a short distance below the surface and it can be delineated only by subsurface measurements. To eliminate the more rapid fluctuations at the surface the criterion of the boundary of North Atlantic Current water was taken as the condition that a temperature of 6°C corresponded to a salinity of 34.95‰ .

In the vicinity of the Grand Banks this boundary is irregular in shape and to get a numerical measure of its general advance toward or retreat from the Grand Banks, the area between the boundary and certain fixed rhumb lines was used. These lines were the 45th parallel, the 49th meridian and a line from 43°N ., 49°W ., through 42°N ., 47°W ., extended to the boundary. This area was larger or smaller as the boundary retreated from or advanced toward the Grand Banks. It was assumed that the position of the boundary was determined by

the relative strengths of the Labrador Current and the Atlantic Current. The relationship was adopted that the area would be increased by 10,000 square kilometers for each million cubic meters per second volume of flow of the Labrador Current entering the area past section U. After adjustment of the measured area by the subtraction of the appropriate area for the measured volume transport of the Labrador Current, the remaining adjusted area, A , was considered to represent the effects of causes associated with the North Atlantic eddy.

Assuming that changes in the strength of the North Atlantic eddy were proportional to changes in the difference in sea level between Bermuda and Charleston, S. C., the fluctuation of the value, sea level at Charleston minus the departure from average at Bermuda, was studied in relation to fluctuations in the adjusted area. If A is expressed in units of 10,000 square kilometers and H is the sea level at Charleston minus the Bermuda departure in feet $13\frac{1}{2}$ months earlier, for 27 surveys made over the period 1934 to 1941 the adjusted area was given by the expression

$$A = 6.8(H - 5.07) + 1.34$$

Since the resumption of oceanographic work by the International Ice Patrol following World War II the following surveys have been made; one in 1948, two in 1949, three in 1950, two in 1951 and two in 1952. The above relationship could not be followed for these 10 postwar surveys, even approximately, until it was realized that instead of a phase difference of $13\frac{1}{2}$ months, the postwar observations had a similar relationship but with a phase difference of $11\frac{1}{2}$ months. Keeping these two different time lags, the combined 37 surveys give the relationship

$$A = 6.97(H - 5.07) + 1.67$$

for computing the adjusted area with a probable error of $\pm 1.5 \times 10^4$ square kilometers. No explanation is offered for the apparent change of 2 months in the time lag.

The dynamic topography of the sea surface deduced from the data collected during the occupation of the section across the Labrador Sea from South Wolf Island, Labrador, to Cape Farewell, Greenland, during the postseason cruise is shown in figure 13. Off South Wolf Island the Labrador Current is seen to have two bands separated by the shoal off Hamilton Inlet. Offshore of the major band over the continental slope there seems to be a closed cyclonic eddy. Seaward of this, at about 56° N., 52° W., the dynamic topography is interpreted as showing the extreme northwestern margins of the North Atlantic eddy as this northward flowing water curves to the eastward; Northward of this the outer margin of the North Atlantic eddy is

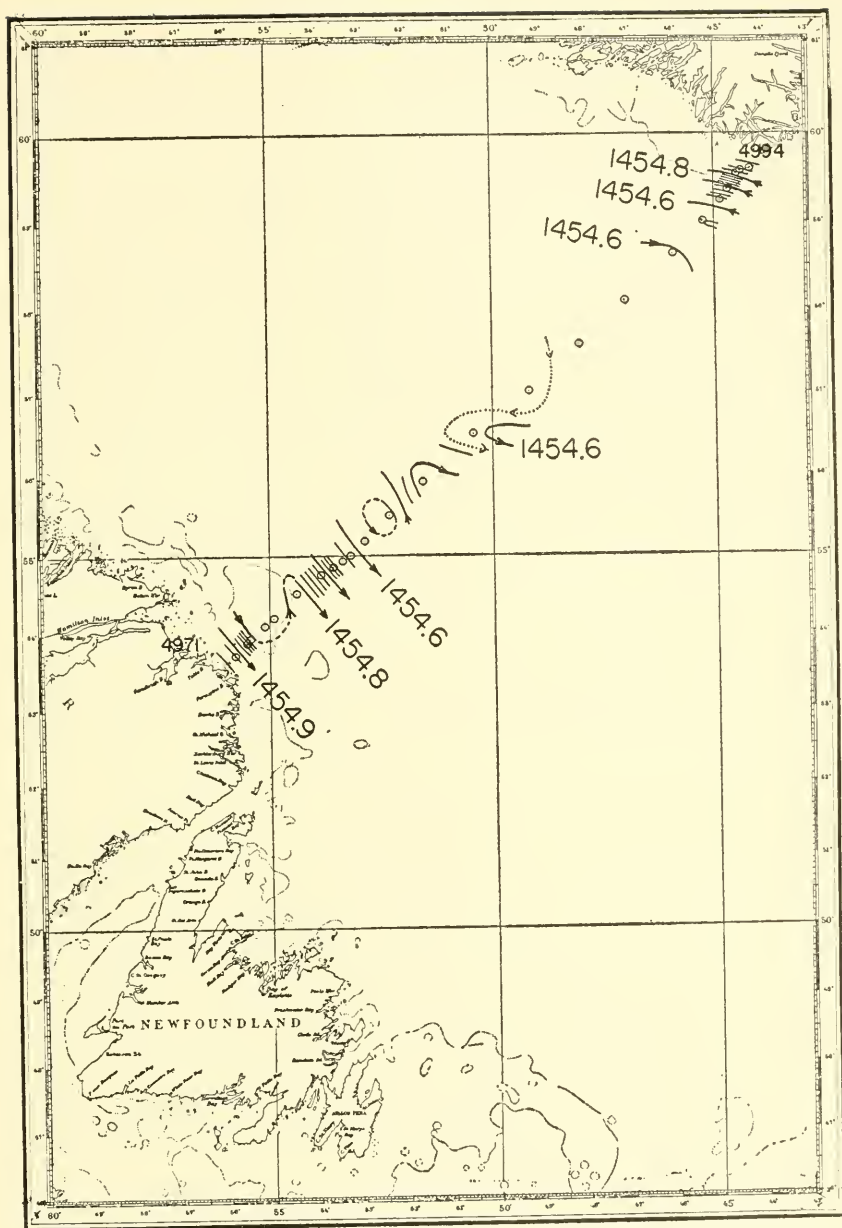


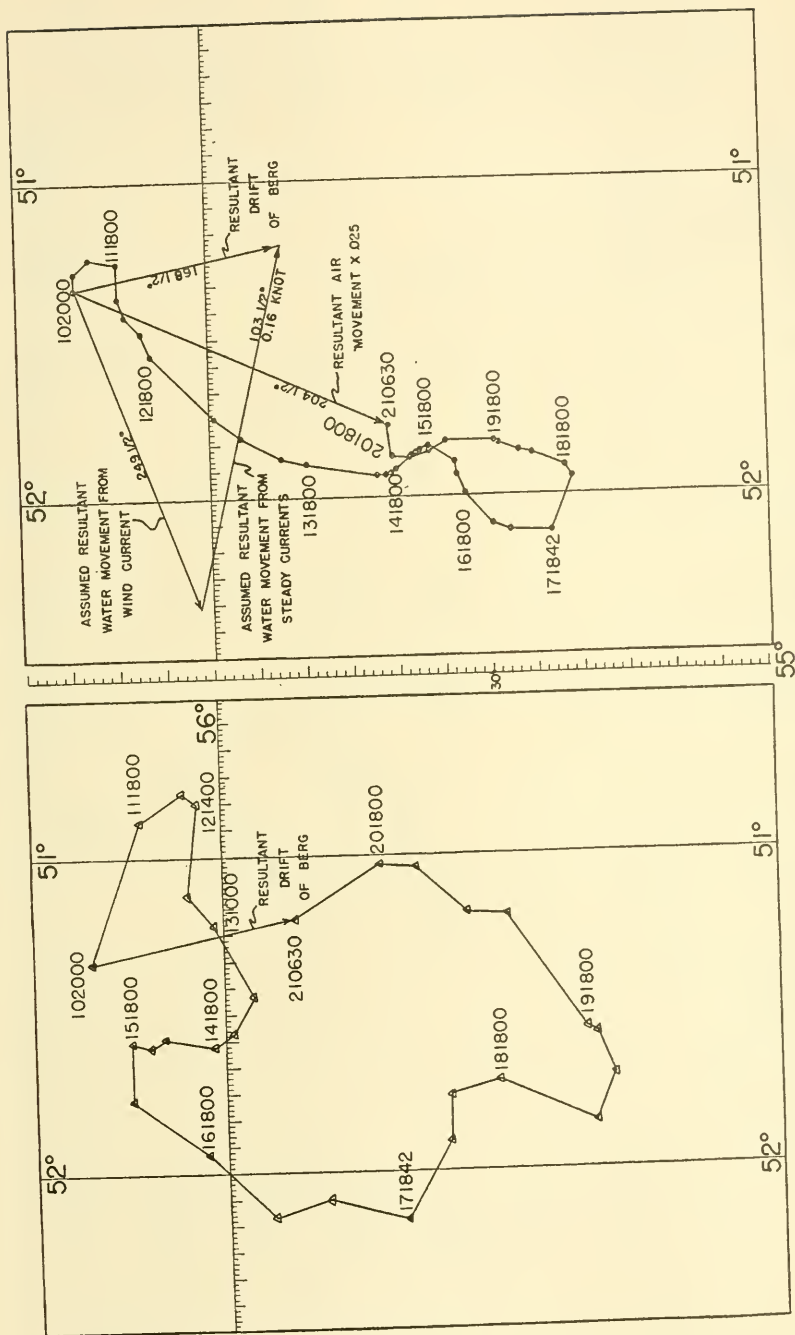
FIGURE 13.—Dynamic topography of the sea surface relative to the 1,500-decibar surface from data collected 17 to 20 July 1952. Oceanographic station positions are indicated and the station numbers are given at turning points.

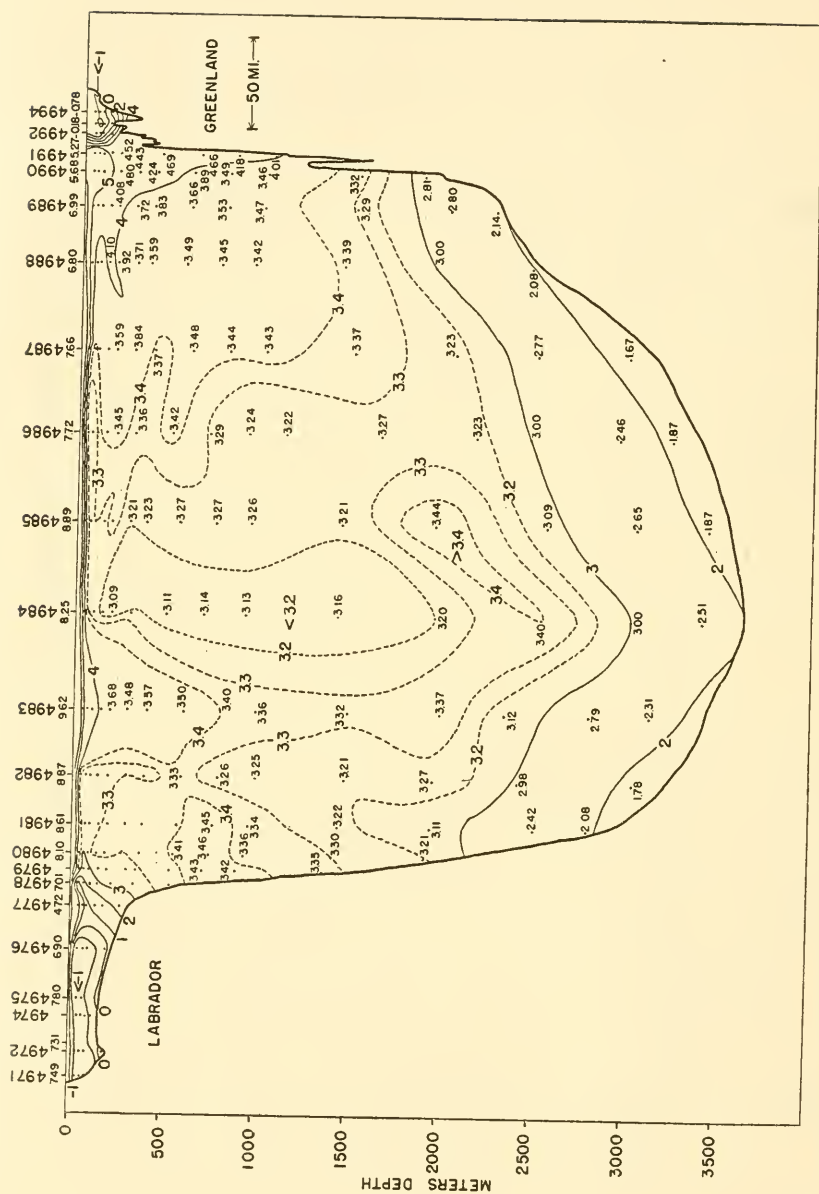
joined by water which has recurved southward from the West Greenland Current. Northward of about 59° N., to the beach at Cape Farewell the West Greenland Current is shown. Since only a single section is available, the direction of flow is uncertain and the course of the dynamic isobaths shown in figure 13 has been deduced by drawing heavily upon what is known from earlier observations and upon the distribution of temperature and salinity.

Of the several bergs tracked by the ship occupying ocean station Bravo the only berg followed for several days was one first picked up at $56^{\circ}15'$ N., $51^{\circ}25'$ W., at 1600 on 10 April. The successive positions of this berg from 2000 on 10 April until 0630 on 21 April, when it had been reduced in size to a growler, have been plotted in the left half of figure 14. Plotted in the right half of this figure are the wind observations reduced to a series of vectors representing one-fortieth of the successive trajectories of an air particle starting from $56^{\circ}14'$ N., $51^{\circ}20'$ W., the position of the berg at 2000 on 10 April. The resultant trajectory is shown as a vector directed toward $204\frac{1}{2}^{\circ}$. Assuming that the wind current was directed 45° to the right of the wind and that the wind factor was 0.025 the resultant water movement has been plotted as directed toward $249\frac{1}{2}^{\circ}$. The resultant berg drift, obtained from the left half of figure 14, was directed toward $168\frac{1}{2}^{\circ}$ and has been assumed to represent the resultant water movement composed of steady current and wind current components. The vector representing the water movement from steady currents, then, had a direction of $103\frac{1}{2}^{\circ}$ and the average speed of the steady currents was $3\frac{3}{4}$ miles per day or about 0.16 knot.

The gaps in our knowledge are too large and numerous to permit us to draw definite conclusions from the above. We do not know the depth of the wind current with respect to the draft of the berg but it is assumed that in April the stability of the water column in this vicinity is slight. We do not know what seasonal variations in the steady current pattern take place between April and July but we assume they are small in this vicinity. The direction and speed of the steady currents deduced in the paragraph above are of the order of magnitude of those which can be found in figure 13 and it is considered probable that this berg (and the others found in the vicinity of ocean station Bravo) arrived at this locality from east of Cape Farewell (rather than from the Labrador side).

The temperature distribution along the section across the Labrador Sea from South Wolf Island, Labrador, to Cape Farewell, Greenland, found during the 1952 post-season cruise is shown in figure 15. The salinity distribution in the Greenland half of this section is given in figure 16. Referring to the temperature section, the frigid part of the Labrador Current is to be seen over the continental shelf and adjacent to it is the warmer part of the Labrador Current over the continental slope. The tongue of warm water, which usually extends from the





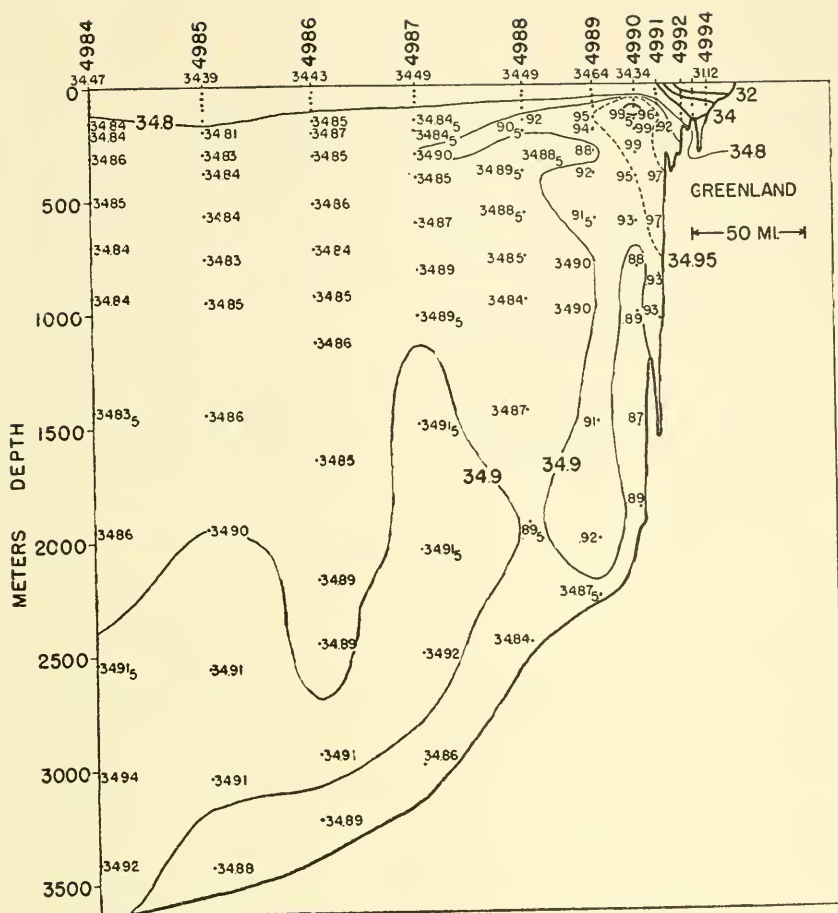


FIGURE 16.—Salinity distribution off Cape Farewell, Greenland, 18 to 20 July 1952.

surface just off-shore of the Labrador Current downward and westward to intersect bottom at intermediate depths on the continental slope, is shown reaching bottom at about 800 meters and associated with the warm water in the upper layers near station 4983. Defined by the 3.4° isotherm, this temperature maximum is interrupted by colder water at station 4982. The warm water at station 4983 is considered to be associated with the North Atlantic eddy and the cyclonic circulation about station 4982 probably brings some of this warmer water into the deeper circulation of the Labrador Current.

The temperature minimum in the intermediate water of the Labrador Sea was not as uniform in temperature as usual and while at stations 4985 and 4986, its temperature was about the same as found in 1951, the temperatures at station 4984 were about a tenth of a degree colder. The maximum temperatures below this temperature minimum are outlined by the 3.3° and 3.4° isotherms.

On the Greenland end of the section the cross-sectional areas in which the temperatures are higher than 4° and 5° show little change from the conditions found in 1951. Reference to figure 16, however, reveals a noticeable, though slight, increase in the values of maximum salinity. The salinity maximum, which was remarkably constant at about 35.04‰ during the 1930's dropped with the disappearance of the Irminger Current from this vicinity to 34.97 in 1949, 34.99 in 1950, 34.96 in 1951, and in 1952 was 35.01‰ . This hints that the Irminger Current after an almost total absence of 4 years from the Cape Farewell area, may be on the point of returning to its former values. As has been pointed out in recent bulletins of this series, maximum salinities below the normal 35.04‰ but about 35.00‰ may be explained by postulating small direct contributions from the outer margins of the North Atlantic eddy in longitudes immediately eastward of Cape Farewell and not dependent upon the recurvature of the Irminger Current in the vicinity of Iceland.

Examination of the velocity profile of the West Greenland Current off Cape Farewell in the summer of 1952 shows a volume transport of 5.93 million cubic meters per second with a mean temperature of 3.79°C and a heat transport of 22.50 million cubic meter degrees centigrade per second. The corresponding normal values (derived in Bulletin No. 35 of this series) for this time of year are 4.51, 4.70, and 21.22 whence the volume of flow was 1.42 above normal, the mean temperature was 0.91 below normal with the heat transport 1.28 above normal. If the West Greenland Current is considered to be made up exclusively of an East Greenland Current component of constant mean temperature of 3.2 and an Irminger Current component of constant mean temperature 5.5 , the observed West Greenland Current can be broken down into these components with volumes of flow of 4.40 and 1.53 respectively. As the seasonal normal values for these components are 1.56 and 2.95, the assumed constant mean temperatures lead to the conclusion that the volume of the East Greenland Current component was about three times its normal value and the Irminger Current component was about half its normal volume transport. If, however, the West Greenland Current at Cape Farewell was not made up exclusively of East Greenland Current and Irminger Current components, the contribution of the Irminger Current component would be smaller than this computed volume transport.

The circulation deduced from the computed values of volume transport, as described above and as given in table 1, is shown schematically in figure 17. In this figure the computed volumes have been rounded to the nearest 0.1 million cu.m/sec, and in the cases of the two occupations of the Bonavista triangle they have been adjusted so that the sum of the transports into the triangle equals the sum of the transports out of the triangle. In other words the

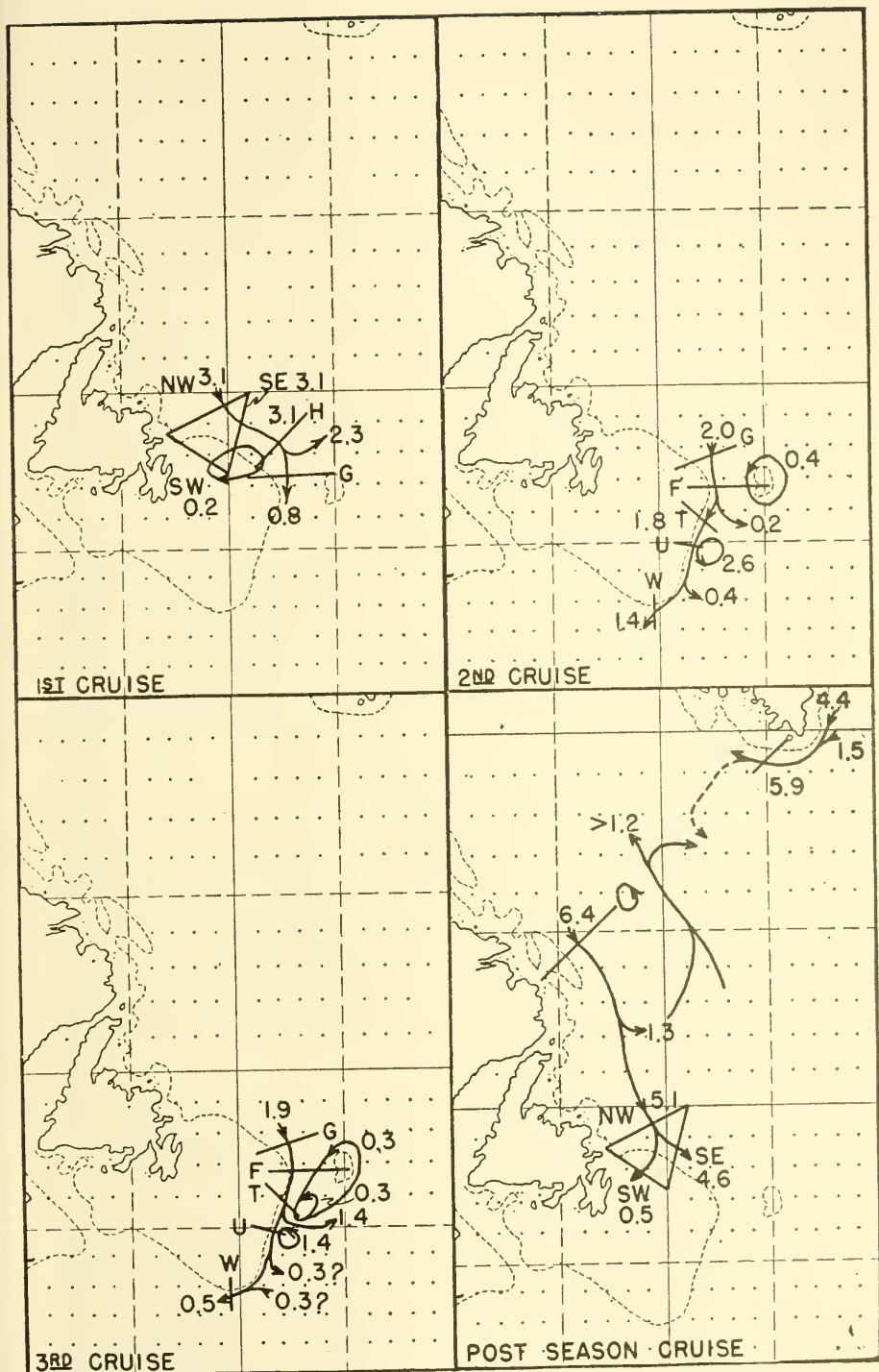


FIGURE 17.—Schematic representation of circulation deduced from sections occupied during 1952. Numerals indicate volume transport in units of $\text{cu.m/sec} \times 10^{-6}$.

vertical movement past the 1,000-decibar surface within the triangle has been considered to be negligibly small.

The dynamic height of the sea surface at South Wolf Island, Labrador, was somewhat higher than the dynamic height of the sea surface at Cape Farewell, Greenland (with reference to the 1,500-decibar surface in each case). This is not unusual and has been interpreted as the result of water entering the Baffin Bay-Labrador Sea system through the northern openings. Below a depth of about 200 meters, however, the water above the 1,500-decibar surface had a net northwesterly direction of flow, and for the entire section from South Wolf Island to Cape Farewell between the sea surface and the 1,500-decibar surface the net volume transport of 0.75 million cu.m/sec northwesterly was found. If there is a net transport through the northern openings into the Baffin Bay-Labrador Sea system, then the sinking past the 1,500-decibar surface must have exceeded these contributions by three-quarter million cu.m/sec.

SUMMARY

1. The surface circulation in the Grand Banks region and the adjacent area northward of the Grand Banks has been discussed on the basis of the dynamic topography found during three surveys made during the season. The exceptional absence of ice permitted, for the first time, the survey in April of the area from 47° N., to 54° N., between the Labrador Shelf and about 45° W. The season was characterized by a major recurvature of Labrador Current water northward, north of the latitude of Flemish Cap.

2. The circulation in the upper 1,000 meters in the Grand Banks region, with particular reference to the Labrador Current, has been given in greater detail on the basis of volume transport, mean temperature, minimum observed temperature and heat transport found during 18 occupations of 9 selected sections during the 1952 season. At three of these sections, for which the normal seasonal variation is available, the 1952 deficiency of the Labrador Current has been given.

3. The temperature-salinity relationships for the three water masses found in the Grand Banks region in 1952 have been compared with conditions found in other years.

4. The relationship between the location of the northern boundary of North Atlantic Current water in the Grand Banks region, the strength of the Labrador Current, and the difference in sea level between Bermuda and Charleston has been given further study with the results indicating that whereas the time lag between the Charleston-Bermuda section and the Grand Banks region was about $13\frac{1}{2}$ months for the 27 surveys made during the period 1934-41, the lag was apparently $11\frac{1}{2}$ months for the 10 surveys made during the period 1948-52.

5. The circulation in the southern part of the Labrador Sea has been inferred from examination of the dynamic heights along a section

from South Wolf Island, Labrador, to Cape Farewell, Greenland, the volume transport and mean temperature of the Labrador Current and West Greenland Current past this section, temperature distribution within the section and salinity distribution within the Greenland half of the section. The Irminger Current component of the West Greenland Current was still subnormal in 1952. Further examination of this section will be made on the basis of total phosphorus and reported upon in the next bulletin of this series.

The measurements of total phosphorus have not been completed and the results will be published in the next bulletin of this series. Except for phosphorus, the data collected during the 1952 season and postseason cruises are tabulated below. The individual station headings give the station number, date, geographical position, depth of water, and give the dynamic height of the sea surface used in the construction of the dynamic topographic charts shown in figures 7, 8, 9, 10, 11, and 13. The depths of water are rough approximations, being uncorrected sonic soundings based on a sounding velocity of 800 fathoms per second and containing an additional mechanical speed error of about $\pm \frac{1}{60}$. Where the depths of the scaled values are enclosed in parentheses, the data are based on extrapolated vertical distribution curves of temperature or salinity or both. Asterisks appearing before observed temperatures indicate that these temperatures were determined from the depth of reversal and the corrected reading of an unprotected thermometer. The symbol σ_t signifies 1,000 (density-1) at atmospheric pressure and temperature t .

Table of Oceanographic Data
STATIONS OCCUPIED IN 1952

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4614; Apr. 1; latitude 45°15' N., longitude 49°13' W.; depth 91 meters; dynamic height 971.027						
0	-0.07	32.84	0	-0.07	32.84	26.39
25	-0.13	32.84	25	-0.13	32.84	26.40
51	-0.35	32.84	50	-0.35	32.84	26.40
76	-0.39	32.87	75	-0.40	32.87	26.43
Station 4616; Apr. 2; latitude 47°16.5' N., longitude 48°05' W.; depth 180 meters; dynamic height 970.976						
0	-0.62	33.24	0	-0.62	33.24	26.73
24	-0.79	33.30	25	-0.80	33.30	26.78
48	-0.73	33.38	50	-0.75	33.39	26.86
72	-0.44	33.47	75	-0.40	33.49	26.93
95	-0.03	33.55	100	0.00	33.57	26.98
143	0.44	33.76	150	0.45	33.79	27.12
Station 4615; Apr. 1; latitude 47°16' N., longitude 48°39' W.; depth 134 meters; dynamic height 971.010						
0	-0.47	32.88	0	-0.47	32.88	26.44
25	-0.50	32.90	25	-0.50	32.90	26.45
49	-0.85	33.00	50	-0.85	33.00	26.55
74	-0.96	33.10	75	-0.95	33.10	26.63
98	-0.34	33.31	100	-0.30	33.31	26.77
123	-0.16	33.38				
Station 4617; Apr. 2; latitude 47°17' N., longitude 47°45' W.; depth 227 meters; dynamic height 970.955						
0	-0.53	33.25	0	-0.53	33.25	26.74
27	-0.56	33.41	25	-0.55	33.40	26.86
54	-0.17	33.56	50	-0.25	33.54	26.96
81	0.44	33.76	75	0.30	33.73	27.08
108	0.55	33.89	100	0.55	33.85	27.17
160	1.30	34.07	150	1.15	34.04	27.28
214	1.57	34.16	200	1.50	34.14	27.34

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4618; Apr. 2; latitude 47°19' N., longitude 47°22' W.; depth 357 meters; dynamic height 970.973						
0-----	-0.46	33.35	0-----	-0.46	33.35	26.81
25-----	-0.45	33.35	25-----	-0.45	33.35	26.81
49-----	-0.41	33.44	50-----	-0.40	33.44	26.89
74-----	-0.26	33.50	75-----	-0.25	33.50	26.93
98-----	-0.13	33.56	100-----	-0.10	33.57	26.98
147-----	0.32	33.76	150-----	0.35	33.78	27.12
196-----	1.56	34.12	200-----	1.60	34.14	27.33
246-----	1.64	34.26	(300)---	2.10	34.44	27.53
Station 4619; Apr. 2; latitude 47°17.5' N., longitude 47°07' W.; depth 1,090 meters; dynamic height 970.924						
0-----	0.60	33.73	0-----	0.60	33.73	27.06
27-----	0.65	33.78	25-----	0.65	33.77	27.10
52-----	0.91	33.95	50-----	0.85	33.93	27.21
79-----	1.29	34.09	75-----	1.25	34.07	27.31
104-----	1.38	34.13	100-----	1.35	34.12	27.34
157-----	1.92	34.33	150-----	1.85	34.31	27.45
210-----	2.38	34.48	200-----	2.30	34.46	27.54
314-----	2.96	34.66	300-----	2.90	34.65	27.64
378-----	3.08	34.68	400-----	3.15	34.70	27.65
567-----	3.67	34.87	600-----	3.70	34.88	27.74
333-----	2.98	34.64	(800)---	3.80	34.89	27.74
433-----	3.48	34.78	(1,000)---	3.70	34.89	27.75
Station 4620; Apr. 2; latitude 47°17' N., longitude 46°36' W.; depth 596 meters; dynamic height 970.896						
0-----	2.25	33.97	0-----	2.25	33.97	27.15
22-----	1.72	33.94	25-----	1.65	33.94	27.16
43-----	1.37	33.96	50-----	1.40	33.97	27.21
65-----	1.49	34.04	75-----	1.80	34.10	27.29
86-----	2.16	34.18	100-----	2.25	34.27	27.39
129-----	2.37	34.42	150-----	2.50	34.49	27.54
172-----	2.62	34.56	200-----	2.85	34.63	27.62
258-----	3.47	34.79	300-----	3.55	34.81	27.70
326-----	3.62	34.82	400-----	3.70	34.86	27.73
487-----	3.76	34.89				
Station 4621; Apr. 2; latitude 47°18.5' N., longitude 45°49' W., depth 290 meters; dynamic height 970.947						
0-----	4.25	33.69	0-----	4.25	33.69	26.74
20-----	4.24	33.71	25-----	4.25	33.71	26.76
40-----	4.24	33.71	50-----	4.25	33.72	26.76
60-----	4.25	33.73	75-----	3.90	33.77	26.84
80-----	3.80	33.79	100-----	3.60	34.05	27.09
120-----	3.48	34.32	150-----	4.00	34.53	27.43
160-----	4.18	34.58	200-----	3.90	34.70	27.58
224-----	3.76	34.76				
Station 4622; Apr. 2; latitude 47°19' N., longitude 45°29' W., depth 253 meters; dynamic height 970.953						
0-----	4.35	33.76	0-----	4.35	33.76	26.78
24-----	4.35	33.76	25-----	4.35	33.76	26.78
48-----	4.37	33.75	50-----	4.35	33.76	26.78
72-----	4.37	33.76	75-----	4.35	33.77	26.79
96-----	4.22	33.88	100-----	4.15	33.91	26.92
144-----	3.06	34.40	150-----	3.10	34.45	27.46
193-----	3.98	34.68	200-----	4.00	34.70	27.57
236-----	3.90	34.76				
Station 4623; Apr. 2; latitude 47°20' N., longitude 45°18' W., depth 220 meters; dynamic height 970.948						
0-----	4.34	33.75	0-----	4.34	33.75	26.78
23-----	4.34	33.77	25-----	4.35	33.76	26.78
46-----	4.35	33.76	50-----	4.35	33.76	26.78
70-----	4.30	33.78	75-----	4.25	33.82	26.84
93-----	4.13	34.02	100-----	4.05	34.10	27.09
139-----	3.88	34.46	150-----	3.90	34.50	27.42
181-----	3.93	34.63	(200)---	3.95	34.69	27.56
Station 4624; Apr. 2; latitude 47°20' N., longitude 45°00' W.; depth 181 meters; dynamic height 970.950						
0-----	4.32	33.78	0-----	4.32	33.78	26.81
24-----	4.32	33.78	25-----	4.30	33.78	26.81
49-----	4.30	33.78	50-----	4.30	33.78	26.81
74-----	4.27	33.80	75-----	4.25	33.80	26.82
98-----	4.22	33.88	100-----	4.20	33.90	26.91
147-----	3.92	34.46	150-----	3.90	34.49	27.41
Station 4625; Apr. 2; latitude 47°25.5' N., longitude 45°12' W., depth 216 meters; dynamic height 970.945						
0-----	4.38	33.74	0-----	4.38	33.74	26.77
27-----	4.40	33.74	25-----	4.40	33.74	26.77
53-----	4.38	33.76	50-----	4.40	33.76	26.78
80-----	4.30	33.82	75-----	4.30	33.80	26.82
106-----	4.14	34.04	100-----	4.20	33.97	26.97
159-----	3.86	34.48	150-----	3.85	34.42	27.36
212-----	3.92	34.66	200-----	3.90	34.63	27.52
Station 4626; Apr. 3; latitude 47°39' N., longitude 45°44' W., depth 286 meters; dynamic height 970.916						
0-----	4.21	33.72	0-----	4.21	33.72	26.77
26-----	4.27	33.73	25-----	4.25	33.73	26.77
53-----	4.23	33.78	50-----	4.25	33.77	26.80
79-----	3.73	34.04	75-----	3.75	33.99	27.03
105-----	3.81	34.32	100-----	3.80	34.27	27.25
157-----	3.97	34.64	150-----	3.95	34.61	27.50
209-----	4.00	34.80	200-----	4.00	34.78	27.63
253-----	4.14	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ _t

Station 4627; Apr. 3; latitude 47°45' N., longitude 45°58' W.; depth 444 meters; dynamic height 970.870

0	3.51	33.79	0	3.51	33.79	26.89
23	3.45	33.82	25	3.45	33.84	26.93
47	2.50	34.02	50	2.50	34.06	27.20
70	2.98	34.33	75	3.10	34.38	27.40
95	3.47	34.56	100	3.50	34.58	27.52
142	3.62	34.70	150	3.60	34.71	27.62
189	3.40	34.74	200	3.40	34.75	27.67
284	3.43	—	300	3.50	34.85	27.74
378	3.82	34.89	(400)	3.85	34.90	27.74

Station 4628; Apr. 3; latitude 47°49' N.; longitude 46°08' W.; depth 1,006 meters; dynamic height 970.861

0	3.07	33.83	0	3.07	33.83	26.96
27	1.99	33.84	25	2.05	33.84	27.06
53	1.47	33.92	50	1.45	33.90	27.15
80	2.31	34.37	75	2.20	34.28	27.40
106	2.61	34.50	100	2.55	34.48	27.53
160	2.84	34.67	150	2.80	34.64	27.63
214	3.25	34.76	200	3.15	34.74	27.68
320	3.61	34.80	300	3.60	34.85	27.73
415	3.58	34.88	400	3.60	34.88	27.75
621	3.52	34.89	600	3.50	34.89	27.77
827	3.42	34.90	800	3.45	34.90	27.78
991	3.33	34.90	1,000	3.35	34.90	27.79

Station 4629; Apr. 3; latitude 47°53.5' N., longitude 46°24' W.; depth 1,162 meters; dynamic height 970.884

0	1.03	33.82	0	1.03	33.82	27.12
24	1.00	33.84	25	1.00	33.84	27.13
48	1.07	34.03	50	1.10	34.04	27.29
72	1.34	34.14	75	1.40	34.17	27.38
96	1.89	34.35	100	2.00	34.37	27.49
144	2.60	34.47	150	2.60	34.47	27.52
192	2.42	34.50	200	2.45	34.52	27.57
288	3.31	34.78	300	3.35	34.79	27.70
373	3.55	34.83	400	3.60	34.84	27.72
565	3.64	34.89	600	3.65	34.89	27.75
762	3.58	34.88	800	3.55	34.89	27.76
956	3.42	34.89	1,000	3.40	34.89	27.78
1,065	3.35	34.89				

Station 4630; Apr. 3; latitude 48°14' N., longitude 45°57' W.; depth 1,060 meters; dynamic height 970.847

0	2.74	34.10	0	2.74	34.10	27.21
27	2.20	34.27	25	2.20	34.25	27.38
53	3.07	34.49	50	3.00	34.48	27.49
80	3.24	34.52	75	3.20	34.52	27.51
106	3.29	—	100	3.30	34.55	27.52
160	3.07	34.68	150	3.10	34.66	27.63
213	3.46	34.78	200	3.40	34.76	27.68
319	3.63	34.85	300	3.65	34.84	27.71
393	3.63	34.88	400	3.60	34.88	27.75
584	3.53	34.88	600	3.50	34.88	27.76
782	3.46	34.88	800	3.45	34.88	27.76
983	3.33	34.90	1,000	3.35	34.90	27.79

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ _t

Station 4631; Apr. 3; latitude 48°35' N., longitude 45°28' W.; depth 1,005 meters; dynamic height 970.855

0	3.63	34.22	0	3.63	34.22	27.23
25	3.24	34.23	25	3.24	34.23	27.26
50	3.26	34.32	50	3.26	34.32	27.34
75	3.00	34.37	75	3.00	34.37	27.41
100	2.85	34.49	100	2.85	34.49	27.51
150	2.95	34.66	150	2.95	34.66	27.64
201	3.20	34.73	200	3.20	34.73	27.67
301	3.69	34.85	300	3.70	34.85	27.72
389	3.68	34.87	400	3.65	34.87	27.74
587	*3.59	34.89	600	3.60	34.89	27.76
789	3.50	34.89	800	3.50	34.89	27.77
962	3.32	34.89	(1,000)	3.30	34.89	27.79

Station 4632; Apr. 3; latitude 49°00' N., longitude 45°00' W.; depth 1,623 meters; dynamic height 970.840

0	3.33	34.42	0	3.33	34.42	27.41
24	3.29	34.43	25	3.30	34.43	27.42
49	3.15	34.44	50	3.15	34.44	27.44
74	3.18	34.45	75	3.20	34.45	27.45
99	3.08	34.56	100	3.10	34.56	27.55
147	3.58	34.79	150	3.55	34.80	27.69
197	3.58	34.83	200	3.60	34.83	27.71
296	3.59	34.86	300	3.60	34.86	27.74
403	3.49	34.86	400	3.50	34.86	27.75
604	3.55	34.88	600	3.55	34.88	27.75
804	3.40	34.88	800	3.40	34.88	27.77
1,010	3.34	34.88	1,000	3.35	34.88	27.77
1,520	3.27	34.93	1,500	3.30	34.93	27.82

Station 4633; Apr. 4; latitude 49°10' N., longitude 45°40' W.; depth 2,838 m.; dynamic height 970.834

0	3.93	34.40	0	3.93	34.40	27.34
25	3.86	34.40	25	3.86	34.40	27.35
50	3.40	34.45	50	3.40	34.45	27.43
75	3.15	34.47	75	3.15	34.47	27.47
100	2.94	34.53	100	2.94	34.53	27.63
150	3.02	34.67	150	3.02	34.67	27.64
200	3.35	34.78	200	3.35	34.78	27.69
300	3.18	34.83	300	3.18	34.83	27.75
411	3.29	34.85	400	3.30	34.85	27.76
610	3.26	34.87	600	3.25	34.87	27.78
806	3.39	34.88	800	3.30	34.88	27.78
1,007	3.37	34.89	1,000	3.40	34.89	27.78
1,512	3.27	34.91	1,500	3.30	34.91	27.81

Station 4634; Apr. 4; latitude 49°21' N., longitude 46°24' W.; dynamic height 970.907

0	5.10	34.21	0	5.10	34.21	27.06
24	5.10	34.22	25	5.10	34.22	27.07
49	4.87	34.25	50	4.85	34.25	27.12
73	4.72	34.34	75	4.70	34.34	27.20
98	4.52	34.37	100	4.50	34.37	27.26
147	3.18	34.43	150	3.20	34.44	27.44
196	4.12	34.74	200	4.15	34.74	27.53
294	3.63	34.79	300	3.65	34.79	27.67
392	3.86	34.88	400	3.85	34.88	27.72
584	3.58	34.89	600	3.55	34.89	27.76
773	3.54	34.89	800	3.50	34.89	27.77
970	3.46	34.88	1,000	3.45	34.89	27.77
1,470	3.33	34.88	1,500	3.35	34.88	27.77

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4635; Apr. 4; latitude 48°59.5' N., longitude 46°46' W.; depth 2,834 meters; dynamic height 970.919						
0	5.26	34.21	0	5.26	34.21	27.04
22	5.23	34.21	25	5.20	34.21	27.05
44	5.16	34.21	50	5.15	34.21	27.05
66	5.13	34.22	75	5.00	34.33	27.16
87	4.85	34.44	100	4.85	34.50	27.32
131	4.89	34.58	150	4.65	34.60	27.42
175	4.35	34.63	200	4.40	34.69	27.51
262	4.57	34.86	300	4.20	34.86	27.68
315	4.05	34.86	400	4.00	34.88	27.71
491	3.95	34.90	600	3.80	34.90	27.75
678	3.68	34.90	800	3.60	34.90	27.77
857	3.56	34.895	1,000	3.50	34.89	27.77
1,321	3.32	34.88	(1,500)	3.30	34.88	27.78
Station 4636; Apr. 4; latitude 48°37.5' N., longitude 47°03' W.; depth 2,561 meters; dynamic height 970.848						
0	4.31	34.36	0	4.31	34.36	27.27
25	4.02	34.36	25	4.02	34.36	27.30
50	3.19	34.45	50	3.19	34.45	27.45
75	2.90	34.50	75	2.90	34.50	27.52
99	2.77	34.51	100	2.80	34.51	27.53
150	2.99	34.68	150	3.00	34.68	27.65
200	3.54	34.80	200	3.55	34.80	27.69
299	3.35	34.82	300	3.35	34.82	27.73
355	3.41	34.84	400	3.45	34.85	27.74
535	3.47	34.86	600	3.45	34.87	27.76
719	3.46	34.88	800	3.45	34.88	27.76
913	3.43	34.88	1,000	3.40	34.88	27.77
1,420	3.34	34.87	(1,500)	3.35	34.87	27.77
Station 4637; Apr. 4; latitude 48°16.5' N., longitude 47°19' W.; depth 1,880 meters; dynamic height 970.842						
0	2.34	34.32	0	2.34	34.32	27.42
26	2.21	34.36	25	2.20	34.36	27.47
52	2.35	34.43	50	2.35	34.43	27.50
78	2.40		75	2.40	34.44	27.51
104	2.36	34.44	100	2.35	34.44	27.51
156	2.91	34.64	150	2.85	34.62	27.62
208	3.31	34.78	200	3.25	34.77	27.70
312	3.51	34.82	300	3.50	34.82	27.72
415	3.52	34.86	400	3.55	34.86	27.74
626	3.06	34.90	600	3.65	34.90	27.76
840	3.51	34.885	800	3.50	34.89	27.77
1,052	3.39	34.89	1,000	3.40	34.89	27.78
1,587	3.30	34.91	1,500	3.35	34.91	27.80
Station 4638; Apr. 4; latitude 47°55.5' N., longitude 47°35' W.; depth 351 meters; dynamic height 970.920						
0	-0.49	33.14	0	-0.49	33.14	26.65
25	-0.29	33.50	25	-0.29	33.50	26.93
48	0.02	33.68	50	0.05	33.70	27.08
73	0.98	33.96	75	1.00	33.98	27.24
96	1.25	34.08	100	1.30	34.10	27.32
146	1.84	34.32	150	1.90	34.34	27.47
194	2.26	34.46	200	2.30	34.48	27.55
			(300)	2.90	34.68	27.66
Station 4639; Apr. 5; latitude 47°45' N., longitude 47°43' W.; depth 298 meters; dynamic height 970.997						
0	-0.60	33.04	0	-0.60	33.04	26.57
24	-0.83	33.16	25	-0.35	33.17	26.66
47	-1.07	33.31	50	-1.05	33.32	26.81
72	-0.75	33.38	75	-0.70	33.40	26.87
95	-0.44	33.51	100	-0.40	33.54	26.97
143	0.09	33.73	150	0.25	33.78	27.13
191	1.52	34.09	200	1.60	34.13	27.32
242	1.91	34.27	(300)	2.20	34.41	27.51
Station 4640; Apr. 5; latitude 47°42.5' N., longitude 48°08' W.; depth 241 meters; dynamic height 971.040						
0	-0.65	32.88	0	-0.65	32.88	26.45
23	-0.77	32.96	25	-0.75	32.97	26.52
46	-1.07	33.10	50	-1.10	33.12	26.65
69	-1.13	33.22	75	-1.15	33.26	26.77
92	-0.83	33.36	100	-0.75	33.37	26.84
139	-0.60	33.44	150	-0.50	33.48	26.92
185	0.26	33.72	200	0.55	33.81	27.14
Station 4641; Apr. 5; latitude 47°40' N., longitude 48°30' W.; depth 207 meters; dynamic height 971.039						
0	-0.53	32.90	0	-0.53	32.90	26.45
27	-0.53	32.97	25	-0.55	32.96	26.50
52	-0.79	33.20	50	-0.75	33.19	26.70
79	-0.91	33.30	75	-0.90	33.29	26.78
105	-0.77	33.34	100	-0.80	33.33	26.81
158	0.30	33.62	150	0.15	33.58	26.97
			(200)	0.75	33.81	27.13
Station 4642; Apr. 5; latitude 47°37' N., longitude 48°54' W.; depth 173 meters; dynamic height 971.045						
0	-0.70	32.85	0	-0.70	32.85	26.42
27	-0.75	32.87	25	-0.75	32.86	26.43
54	-1.03	33.11	50	-1.00	33.07	26.61
81	-0.94	33.27	75	-0.95	33.24	26.75
107	-0.63	33.38	100	-0.70	33.35	26.82
162	0.46	33.63	150	0.25	33.57	26.97
Station 4643; Apr. 5; latitude 47°49' N., longitude 48°42' W.; depth 220 meters; dynamic height 971.048						
0	-0.54	32.89	0	-0.54	32.89	26.44
23	-0.54	32.90	25	-0.55	32.91	26.46
46	-1.05	33.05	50	-1.05	33.07	26.61
69	-1.11		75	-1.10	33.19	26.71
92	-0.86	33.28	100	-0.75	33.32	26.80
138	-0.29	33.50	150	-0.05	33.56	26.97
184	0.75	33.74	(200)	1.10	33.82	27.11

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4444; Apr. 5; latitude 48°00' N., longitude 48°32' W.; depth 312 meters; dynamic height 971.020

0	-0.50	32.87	0	-0.50	32.87	26.43
22	-0.56	32.90	25	-0.60	32.95	26.49
44	-1.07	33.18	50	-1.15	33.20	26.72
65	-1.07	33.26	75	-0.95	33.30	26.79
87	-0.84	33.36	100	-0.60	33.44	26.89
131	0.24	33.64	150	0.95	33.79	27.09
174	1.55	33.98	200	1.70	34.10	27.29
261	1.89	34.28	(300)	2.00	34.38	27.49

Station 4445; Apr. 5; latitude 48°06.5' N., longitude 48°27' W.; depth 739 meters; dynamic height 970.969

0	-0.80	33.04	0	-0.80	33.04	26.58
21	-1.10	33.12	25	-1.10	33.15	26.67
42	-1.03	33.29	50	-0.90	33.34	26.83
63	-0.61	33.41	75	-0.50	33.47	26.92
84	-0.42	33.53	100	0.00	33.66	27.05
126	0.85	33.90	150	1.20	34.07	27.31
169	1.40	34.18	200	1.80	34.32	27.47
253	2.34	34.48	300	2.55	34.56	27.60
319	2.64	34.58	400	3.10	34.72	27.68
505	3.56	34.84	(600)	3.60	34.88	27.75

Station 4446; Apr. 5; latitude 48°30' N., longitude 48°14' W.; depth 1,962 meters; dynamic height 970.834

0	2.31	34.39	0	2.31	34.39	27.48
21	2.31	34.39	25	2.30	34.39	27.48
42	2.39	34.40	50	2.35	34.39	27.47
63	2.26	34.37	75	2.45	34.46	27.52
84	2.62	34.56	100	2.75	34.62	27.63
127	2.91	34.69	150	3.05	34.74	27.69
169	3.18	34.77	200	3.25	34.79	27.71
253	3.35	34.81	300	3.35	34.82	27.73
391	3.38	34.84	400	3.40	34.84	27.74
588	3.52	34.86	600	3.50	34.86	27.75
778	3.47	34.90	800	3.45	34.89	27.77
990	3.40	34.88	1,000	3.40	34.88	27.77
1,498	3.35	34.92	1,500	3.35	34.91	27.80

Station 4447; Apr. 5; latitude 48°53' N., longitude 48°00' W.; depth 2,320 meters; dynamic height 970.823

0	3.81	34.40	0	3.81	34.40	27.35
25	3.61	34.42	25	3.61	34.42	27.39
50	3.05	34.50	50	3.05	34.50	27.50
75	2.66	34.52	75	2.66	34.52	27.56
99	3.05	34.61	100	3.05	34.62	27.60
150	3.59	34.81	150	3.60	34.81	27.70
200	3.54	34.84	200	3.55	34.84	27.72
299	3.54	34.86	300	3.55	34.86	27.74
338	3.59	34.87	400	3.55	34.87	27.76
515	3.43	34.87	600	3.40	34.87	27.77
696	3.41	34.88	800	3.40	34.90	27.79
886	3.36	34.91	1,000	3.35	34.90	27.79
1,390	3.35	34.89	(1,500)	3.35	34.90	27.79

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4648; Apr. 6; latitude 49°17.5' N., longitude 47°49' W.; depth 2,598 meters; dynamic height 970.831

0	3.94	34.37	0	3.94	34.37	27.32
26	3.90	34.37	25	3.90	34.37	27.32
51	2.93	34.52	50	2.95	34.52	27.53
76	2.87	34.54	75	2.90	34.54	27.55
101	2.85	34.60	100	2.85	34.60	27.60
153	3.59	34.81	150	3.55	34.81	27.70
204	3.39	34.82	200	3.40	34.82	27.73
305	3.34	34.84	300	3.30	34.84	27.75
438	3.41	34.85	400	3.40	34.85	27.75
653	3.53	34.88	600	3.50	34.87	27.76
865	3.43	34.89	800	3.45	34.89	27.77
1,082	3.34	34.88	1,000	3.35	34.88	27.77
1,625	3.20	34.93	1,500	3.25	34.92	27.82

Station 4649; Apr. 6; latitude 49°41' N., longitude 47°42' W.; depth 2,651 meters; dynamic height 970.894

0	4.85	34.34	0	4.85	34.34	27.16
24	4.86	34.36	25	4.85	34.36	27.21
48	4.70	34.50	50	4.70	34.51	27.34
72	4.62	34.58	75	4.65	34.58	27.40
96	4.58	34.57	100	4.60	34.57	27.40
143	4.46	34.58	150	4.25	34.58	27.44
191	2.68	34.50	200	2.70	34.52	27.55
287	3.66	34.77	300	3.60	34.78	27.67
359	3.38	34.79	400	3.40	34.80	27.71
512	3.43	34.84	600	3.45	34.86	27.75
728	3.68	34.90	800	3.65	34.90	27.76
914	3.58	34.885	1,000	3.50	34.89	27.77
1,387	3.33	34.87	(1,500)	3.30	34.87	27.75

Station 4650; Apr. 6; latitude 49°50' N., longitude 48°20' W.; depth 2,561 meters; dynamic height 970.850

0	4.52	34.26	0	4.52	34.26	27.17
26	3.94	34.38	25	3.95	34.37	27.32
50	3.51	34.50	50	3.50	34.50	27.46
76	3.75	34.62	75	3.75	34.62	27.53
100	3.73	34.68	100	3.75	34.68	27.57
152	3.91	34.80	150	3.90	34.80	27.66
202	3.17	34.77	200	3.20	34.77	27.71
302	3.24	34.80	300	3.25	34.80	27.72
381	3.37	34.82	400	3.40	34.83	27.73
580	3.45	34.86	600	3.45	34.86	27.75
785	3.42	34.86	800	3.40	34.86	27.76
994	3.37	34.86	1,000	3.35	34.86	27.76
1,534	3.34	34.91	1,500	3.35	34.91	27.80

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4651; Apr. 6; latitude 49°59.5' N., longitude 49°00' W.; depth 2,607 meters; dynamic height 970.825						
0	3.29	34.42	0	3.29	34.42	27.42
27	3.12	34.45	25	3.15	34.45	27.45
53	2.82	34.45	50	2.85	34.45	27.48
79	2.31	34.48	75	2.40	34.47	27.54
105	2.31	34.57	100	2.25	34.55	27.61
159	2.63	34.68	150	2.55	34.66	27.68
211	2.85	34.76	200	2.80	34.74	27.71
316	3.16	34.81	300	3.10	34.80	27.74
404	*3.45	34.86	400	3.45	34.86	27.75
611	3.37	34.87	600	3.35	34.87	27.77
824	3.31	34.87	800	3.30	34.87	27.78
1,035	3.31	34.88	1,000	3.30	34.88	27.78
1,571	3.30	34.915	1,500	3.30	34.91	27.81
Station 4652; Apr. 6; latitude 49°34' N., longitude 49°10' W.; depth 1,685 meters; dynamic height 970.846						
0	2.09	34.30	0	2.09	34.30	27.42
28	2.04	34.39	25	2.05	34.38	27.49
57	2.04	34.44	50	2.05	34.43	27.53
85	2.27	34.50	75	2.20	34.47	27.56
114	2.62	34.59	100	2.50	34.54	27.58
171	2.90	34.70	150	2.80	34.66	27.65
228	3.35	34.80	200	3.15	34.75	27.69
342	3.46	34.83	300	3.45	34.82	27.72
475	*3.50	34.84	400	3.50	34.84	27.73
720	3.58	34.87	600	3.55	34.86	27.74
971	3.48	34.89	800	3.55	34.88	27.75
1,214	3.37	34.87	1,000	3.45	34.89	27.77
			(1,500)	3.30	34.88	27.78
Station 4653; Apr. 6; latitude 49°12.5' N., longitude 49°19' W.; depth 1,550 meters; dynamic height 970.851						
0	2.33	34.33	0	2.33	34.33	27.42
24	2.44	34.39	25	2.45	34.38	27.45
49	2.43	34.38	50	2.45	34.38	27.45
73	2.36	34.40	75	2.35	34.40	27.48
97	2.28	34.45	100	2.30	34.46	27.54
146	2.68	34.59	150	2.70	34.60	27.61
195	2.92	34.72	200	2.95	34.73	27.69
292	3.28	34.78	300	3.30	34.79	27.71
476	3.44	34.85	400	3.45	34.83	27.72
720	3.46	34.86	600	3.45	34.86	27.75
963	3.44	34.89	800	3.45	34.87	27.76
1,198	3.34	34.88	1,000	3.40	34.89	27.78
1,585	3.32	34.90	1,500	3.30	34.90	27.80
Station 4654; Apr. 7; latitude 48°41' N., longitude 49°31' W.; depth 1,100 meters; dynamic height 970.926						
0	-0.28	33.45	0	-0.28	33.45	26.89
24	-0.08	33.58	25	-0.05	33.59	26.99
48	0.03	33.73	50	0.05	33.74	27.11
72	0.59	33.84	75	0.65	33.85	27.16
95	0.94	34.08	100	1.00	34.09	27.33
143	1.59	34.28	150	1.75	34.30	27.45
190	2.62	34.46	200	2.65	34.48	27.52
285	2.73	34.62	300	2.75	34.63	27.63
376	2.97	34.70	400	3.05	34.72	27.68
562	3.69	34.87	600	3.70	34.88	27.74
763	3.62	34.89	800	3.60	34.89	27.76
911	3.55	34.89	(1,000)	3.50	34.89	27.77
Station 4655; Apr. 7; latitude 48°31' N., longitude 49°35' W.; depth 629 meters; dynamic height 970.933						
0	-0.21	33.42	0	-0.21	33.42	26.87
24	-0.16	33.46	25	-0.10	33.57	26.98
47	0.50	33.84	50	0.50	33.85	27.17
71	0.51	33.90	75	0.55	33.91	27.22
94	0.56	33.92	100	0.60	33.94	27.23
142	1.29	34.16	150	1.50	34.20	27.39
190	2.35	34.40	200	2.40	34.42	27.50
284	2.54	34.54	300	2.70	34.58	27.59
332	2.94	34.66	400	3.30	34.78	27.70
524	3.60	34.86	(600)	3.65	34.88	27.74
Station 4656; Apr. 7; latitude 48°13' N., longitude 49°39' W.; depth 223 meters; dynamic height 971.054						
0	-0.72	32.76	0	-0.72	32.76	26.35
24	-0.73	32.77	25	-0.75	32.77	26.36
48	-1.00	32.81	50	-1.00	32.81	26.40
72	-1.20	32.99	75	-1.20	33.00	26.56
95	-1.11	33.19	100	-1.05	33.22	26.73
143	-0.27	33.49	150	-0.05	33.53	26.94
190	1.18	33.84	(200)	1.45	33.93	27.17
Station 4657; Apr. 7; latitude 47°58' N., longitude 49°42' W.; depth 175 meters; dynamic height 971.048						
0	-0.65	32.80	0	-0.65	32.80	26.39
25	-0.69	32.82	25	-0.69	32.82	26.40
49	-1.03	32.93	50	-1.05	32.93	26.50
74	-1.08	33.12	75	-1.10	33.12	26.65
99	-1.04	33.23	100	-1.05	33.23	26.74
148	0.20	33.53	150	0.25	33.54	26.94
Station 4658; Apr. 7; latitude 47°47' N., longitude 49°45' W.; depth 114 meters; dynamic height 971.042						
0	-0.16	32.78	0	-0.16	32.78	26.35
23	-0.39	32.83	25	-0.45	32.85	26.42
45	-0.98	32.97	50	-1.05	32.99	26.55
68	-1.05	33.04	75	-0.90	33.09	26.62
90	-0.32	33.30	(100)	0.00	33.40	26.84
Station 4659; Apr. 7; latitude 47°21' N., longitude 49°59' W.; depth 94 meters; dynamic height 971.063						
0	0.45	32.68	0	0.45	32.68	26.24
26	0.22	32.72	25	0.20	32.72	26.28
52	0.13	32.73	50	0.15	32.73	26.29
78	-0.29	32.82	75	-0.25	32.81	26.38
Station 4660; Apr. 7; latitude 47°33' N., longitude 50°25' W.; depth 123 meters; dynamic height 971.064						
0	0.32	32.58	0	0.32	32.58	26.17
25	0.28	32.57	25	0.28	32.57	26.16
50	-0.03	32.71	50	-0.03	32.71	26.28
74	-0.31	32.93	75	-0.30	32.94	26.48
99	-0.28	33.10	100	-0.30	33.11	26.61

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4661; Apr. 7; latitude 47°42.5' N., longitude 50°42' W.; depth 128 meters; dynamic height 971.057

0	-0.09	32.74	0	-0.09	32.74	26.31
24	-0.15	32.73	25	-0.15	32.73	26.31
48	-0.29	32.74	50	-0.35	32.74	26.32
72	-0.78	32.88	75	-0.75	32.90	26.46
96	-0.40	33.10	100	-0.30	33.15	26.64

Station 4662; Apr. 8; latitude 47°50' N., longitude 51°00' W.; depth 123 meters; dynamic height 971.063

0	0.10	32.61	0	0.10	32.61	26.21
25	0.02	32.61	25	0.02	32.61	26.21
51	-0.42	32.70	50	-0.35	32.70	26.28
76	-0.83	32.79	75	-0.80	32.79	26.58
102	-0.36	33.15	100	-0.40	33.13	26.64

Station 4663; Apr. 8; latitude 47°58' N., longitude 51°20' W.; depth 194 meters; dynamic height 971.055

0	-0.54	32.65	0	-0.54	32.65	26.26
25	-0.58	32.67	25	-0.58	32.67	26.27
50	-0.72	32.78	50	-0.72	32.78	26.37
75	-1.07	32.98	75	-1.07	32.98	26.54
100	-0.75	33.12	100	-0.75	33.12	26.64
150	-0.36	33.29	150	-0.36	33.29	26.75

Station 4664; Apr. 8; latitude 48°06.5' N., longitude 51°39' W.; depth 220 meters; dynamic height 971.046

0	-0.70	32.66	0	-0.70	32.66	26.27
25	-0.85	32.70	25	-0.85	32.70	26.30
49	-1.18	32.96	50	-1.15	32.97	26.53
74	-1.31	33.01	75	-1.30	33.01	26.57
98	-1.15	33.13	100	-1.10	33.13	26.66
147	-0.80	33.28	150	-0.75	33.29	26.77

Station 4665; Apr. 8; latitude 48°14' N., longitude 51°58' W.; depth 181 meters; dynamic height 971.060

0	-0.77	32.41	0	-0.77	32.41	26.08
24	-0.89	32.44	25	-0.90	32.44	26.10
48	-1.39	32.73	50	-1.40	32.74	26.36
72	-1.50	32.84	75	-1.50	32.85	26.44
97	-1.41	33.00	100	-1.35	33.02	26.58
145	-0.33	33.34	150	-0.20	33.37	26.82

Station 4666; Apr. 8; latitude 48°23.5' N., longitude 52°22' W.; depth 197 meters; dynamic height 971.057

0	-0.89	32.54	0	-0.89	32.54	26.19
23	-1.03	32.60	25	-1.05	32.60	26.24
47	-1.30	32.74	50	-1.35	32.75	26.36
70	-1.49	32.82	75	-1.50	32.85	26.44
93	-1.36	33.00	100	-1.30	33.03	26.58
140	-1.00	33.22	(150)	-0.90	33.26	26.76

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4667; Apr. 8; latitude 48°34' N., 52°41' W., longitude depth 274 meters; dynamic height 971.049

0	-0.92	32.68	0	-0.92	32.68	26.30
24	-0.95	32.70	25	-0.95	32.70	26.31
47	-1.11	32.72	50	-1.15	32.73	26.34
71	-1.52	32.86	75	-1.50	32.89	26.47
94	-1.30	33.04	100	-1.25	33.07	26.62
141	-1.18	33.29	150	-1.00	33.33	26.82
188	-0.26	33.48	200	0.05	33.55	26.96
235	1.01	33.82				

Station 4668; Apr. 8; latitude 48°38.5' N., longitude 52°49' W.; depth 119 meters; dynamic height 971.054

0	-0.97	32.61	0	-0.97	32.61	26.25
23	-1.04	32.61	25	-1.05	32.61	26.25
45	-1.20	32.65	50	-1.25	32.68	26.30
68	-1.48	32.82	75	-1.40	32.88	26.47
90	-1.03	32.99	(100)	-0.90	33.07	26.61

Station 4669; Apr. 8; latitude 48°44' N., longitude 52°58' W.; depth 107 meters; dynamic height 971.060

0	-1.13	32.55	0	-1.13	32.55	26.19
25	-1.14	32.55	25	-1.14	32.55	26.19
50	-1.40	32.66	50	-1.40	32.66	26.29
75	-1.48	32.80	75	-1.48	32.80	26.41
			(100)	-1.25	32.95	26.52

Station 4670; Apr. 8; latitude 48°46' N., longitude 52°51' W.; depth 174 meters; dynamic height 971.049

0	-0.79	32.65	0	-0.79	32.65	26.26
23	-0.88	32.69	25	-0.90	32.69	26.30
46	-0.97	32.71	50	-1.05	32.73	26.34
69	-1.44	32.86	75	-1.40	32.90	26.48
91	-1.33	33.03	100	-1.25	33.09	26.63
136	-0.74	33.30	(150)	-0.45	33.38	26.84

Station 4671; Apr. 8; latitude 48°48' N., longitude 52°46' W.; depth 229 meters; dynamic height 971.048

0	-0.84	32.68	0	-0.84	32.68	26.29
25	-0.87	32.69	25	-0.87	32.69	26.29
49	-1.02	32.70	50	-1.00	32.70	26.31
74	-1.44	32.89	75	-1.45	32.90	26.48
98	-1.25	33.07	100	-1.25	33.10	26.64
148	-1.22	33.31	150	-1.20	33.47	26.95
197	0.48	33.70	200	0.70	33.71	27.05

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4672; Apr. 8; latitude 48°53' N., longitude 52°30' W.; depth 351 meters; dynamic height 971.069						
0	-0.90	32.66	0	-0.90	32.66	26.28
25	-0.91	32.66	25	-0.91	32.66	26.28
50	-1.25	32.73	50	-1.25	32.73	26.34
74	-1.44	32.89	75	-1.45	32.90	26.48
99	-1.40	33.06	100	-1.40	33.07	26.62
149	-1.73	33.29	150	-1.75	33.29	26.80
198	-0.27	33.52	200	-0.20	33.53	26.95
297	1.78	34.20	300	1.80	34.22	27.39

Station 4673; Apr. 8; latitude 48°59' N., longitude 52°11' W.; depth 290 meters; dynamic height 971.054

0	-0.96	32.61	0	-0.96	32.61	26.25
25	-0.85	32.69	25	-0.85	32.69	26.29
50	-1.06	32.72	50	-1.06	32.72	26.33
75	-1.49	33.01	75	-1.49	33.01	26.58
100	-1.29	33.15	100	-1.29	33.15	26.68
150	-1.71	33.30	150	-1.71	33.30	26.81
200	0.45	33.68	200	0.45	33.68	27.03
280	2.38	34.52				

Station 4674; Apr. 8; latitude 49°03.5' N., longitude 51°57' W.; depth 297 meters; dynamic height 971.011

0	-1.28	32.68	0	-1.28	32.68	26.30
24	-1.49	32.74	25	-1.50	32.74	26.36
48	-1.60	33.17	50	-1.60	33.18	26.71
72	-1.56	33.28	75	-1.50	33.29	26.80
95	-1.05	33.36	100	-1.05	33.37	26.85
143	-1.45	33.44	150	-1.35	33.47	26.95
191	0.73	33.86	200	0.90	33.92	27.21
272	1.74	34.26				

Station 4675; Apr. 8; latitude 49°10' N., longitude 51°36' W.; depth 284 meters; dynamic height 970.983

0	-0.58	33.03	0	-0.58	33.03	26.56
23	-0.74	33.14	25	-0.75	33.15	26.66
46	-0.92	33.24	50	-0.90	33.26	26.76
70	-0.94	33.32	75	-0.90	33.34	26.83
93	-0.76	33.43	100	-0.70	33.46	26.92
139	-0.20	33.67	150	0.15	33.73	27.09
185	1.17	33.98	200	1.40	34.06	27.28
241	1.86	34.26				

Station 4676; Apr. 9; latitude 49°19.5' N., longitude 51°06' W.; depth 326 meters; dynamic height 970.935

0	-0.39	33.32	0	-0.39	33.32	26.79
25	-0.29	33.38	25	-0.29	33.38	26.83
49	-0.55	33.57	50	-0.55	33.57	27.00
74	-0.40	33.62	75	-0.35	33.62	27.03
99	-0.03	33.70	100	0.00	33.70	27.08
148	1.10	34.06	150	1.15	34.08	27.31
197	1.78	34.32	200	1.80	34.33	27.47
296	2.74	34.61	300	2.80	34.62	27.62

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4677; Apr. 9; latitude 49°28' N., longitude 50°39' W.; depth 335 meters; dynamic height 970.908						
0	-0.35	33.37	0	-0.35	33.37	26.82
25	-0.47	33.45	25	-0.47	33.45	26.90
50	-0.42	33.59	50	-0.42	33.59	27.01
74	0.35	33.76	75	0.35	33.77	27.12
99	0.99	33.99	100	1.00	33.99	27.25
149	0.83	34.14	150	0.85	34.15	27.39
			(200)	1.85	34.52	27.62
			(300)	2.95	34.69	27.66

Station 4678; Apr. 9; latitude 49°40' N., longitude 50°02' W.; depth 620 meters; dynamic height 970.861

0	1.21	34.00	0	1.21	34.00	27.25
25	0.95	34.00	25	0.95	34.00	27.26
49	0.83	34.06	50	0.85	34.07	27.33
74	1.14	34.18	75	1.15	34.19	27.40
98	1.62	34.32	100	1.65	34.33	27.48
148	1.98	34.46	150	2.00	34.47	27.57
198	2.50	34.57	200	2.50	34.58	27.61
296	2.93	34.71	300	2.95	34.72	27.69
401	3.31	34.81	400	3.20	34.81	27.74
596	3.46	34.89	600	3.45	34.89	27.77

Station 4679; Apr. 9; latitude 49°48' N., longitude 49°31' W.; depth 1,340 meters; dynamic height 970.888

0	0.84	33.90	0	0.84	33.90	27.19
25	0.83	33.91	25	0.83	33.91	27.20
49	0.70	34.06	50	0.70	34.06	27.33
74	1.03	34.14	75	1.05	34.15	27.38
98	1.48	34.32	100	1.50	34.33	27.49
147	1.97	34.46	150	2.00	34.46	27.56
196	1.96	34.49	200	2.00	34.50	27.59
294	3.35	34.73	300	3.35	34.73	27.65
383	3.35	34.78	400	3.35	34.79	27.70
577	3.40	34.84	600	3.40	34.85	27.75
772	3.53	34.88	800	3.55	34.88	27.75
968	3.57	34.885	1,000	3.55	34.89	27.76
1,264	3.35	34.90				

Station 4680; Apr. 9; latitude 50°00' N., longitude 49°00' W.; depth 1,905 meters; dynamic height 970.815

0	3.49	34.43	0	3.49	34.43	27.40
24	3.29	34.44	25	3.30	34.44	27.43
47	2.54	34.50	50	2.55	34.52	27.57
70	3.04	34.65	75	3.00	34.65	27.63
93	2.49	34.63	100	2.60	34.66	27.67
140	3.43	34.82	150	3.45	34.82	27.72
186	3.41	34.83	200	3.45	34.84	27.73
279	3.70	34.89	300	3.60	34.88	27.75
324	3.41	34.86	400	3.35	34.85	27.75
488	3.30	34.845	600	3.30	34.86	27.77
654	3.32	34.87	800	3.30	34.88	27.78
826	3.32	34.88	1,000	3.30	34.89	27.79
1,271	3.32	34.90	(1,500)	3.30	34.90	27.80

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4681; Apr. 9; latitude 50°17' N., longitude 50°06' W.; depth 1,074 meters; dynamic height 1454.649

0	1.14	33.99	0	1.14	33.99	27.24
24	1.12	34.04	25	1.10	34.04	27.29
48	1.32	34.12	50	1.35	34.14	27.35
72	1.55	34.27	75	1.55	34.27	27.44
96	1.54	34.30	100	1.55	34.31	27.47
142	1.80	34.41	150	1.85	34.43	27.54
190	2.13	34.49	200	2.20	34.51	27.59
286	3.01	34.68	300	3.05	34.70	27.66
360	3.09	34.73	400	3.20	34.76	27.70
539	3.52	34.85	600	3.55	34.86	27.74
716	3.62	34.88	800	3.55	34.89	27.76
908	3.48	34.89	(1,000)	3.45	34.89	27.77

Station 4682; Apr. 9; latitude 50°38.5' N., longitude 50°50' W.; depth 370 meters; dynamic height 1,454.657

0	-0.15	33.40	0	-0.15	33.40	26.85
20	0.52	33.79	25	0.50	33.80	27.13
41	0.40	33.81	50	0.40	33.85	27.18
61	0.38	33.91	75	0.65	34.01	27.29
82	0.80	34.06	100	1.10	34.16	27.39
122	1.39	34.27	150	1.90	34.37	27.50
163	2.05	34.41	200	2.40	34.53	27.58
245	2.72	34.64	300	3.05	34.74	27.69

Station 4683; Apr. 10; latitude 50°36.5' N., longitude 50°40' W.; depth 704 meters; dynamic height 1,454.642

0	-0.26	33.34	0	-0.26	33.34	26.80
20	-0.24	33.54	25	-0.10	33.63	27.02
39	0.37	33.94	50	0.65	34.08	27.34
59	0.96	34.28	75	1.35	34.25	27.44
78	1.44	34.28	100	1.70	34.35	27.49
116	1.84	34.40	150	2.20	34.49	27.57
155	2.25	34.50	200	2.50	34.61	27.64
210	*2.53	34.63	300	3.05	34.75	27.70
360	3.33	34.80	400	3.45	34.83	27.72
508	3.58	34.88	(600)	3.55	34.89	27.76

Station 4684; Apr. 10; latitude 50°34' N., longitude 50°23' W.; depth 1,060 meters; dynamic height 1,454.694

0	-0.73	33.23	0	-0.73	33.23	26.73
23	-0.64	33.41	25	-0.55	33.43	26.88
44	0.11	33.67	50	0.20	33.72	27.09
67	0.33	33.86	75	0.35	33.90	27.22
89	0.34	33.94	100	0.45	33.99	27.28
134	1.09	34.20	150	1.50	34.29	27.46
178	2.08	34.42	200	2.30	34.49	27.56
267	2.70	34.61	300	2.90	34.67	27.66
267	2.76	34.63	400	3.25	34.76	27.69
413	3.29	34.77	600	3.55	34.85	27.73
567	3.50	34.84	(800)	3.60	34.88	27.75
733	3.58	34.88	(1,000)	3.50	34.89	27.77

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4685; Apr. 10; latitude 50°26.5' N., longitude 49°28' W.; depth, 1,609 meters; dynamic height 1,454.596

0	3.09	34.35	0	3.09	34.35	27.38
24	3.28	34.38	25	3.30	34.38	27.38
47	3.13	34.44	50	3.10	34.45	27.46
71	2.54	34.52	75	2.45	34.52	27.57
94	2.22	34.52	100	2.25	34.52	27.59
141	2.59	34.63	150	2.65	34.65	27.66
188	2.96	34.72	200	3.05	34.74	27.69
282	3.46	34.82	300	3.45	34.83	27.72
289	3.38	34.82	400	3.40	34.86	27.76
413	3.36	34.86	600	3.40	34.86	27.76
606	3.38	34.86	800	3.30	34.87	27.78
774	3.33	34.87	1,000	3.30	34.88	27.78
1,185	3.31	34.89	(1,500)	3.30	34.90	27.80

Station 4686; Apr. 10; latitude 50°16' N., longitude 48°23' W.; depth 2,469 meters; dynamic height 1,454.606

0	4.65	34.32	0	4.65	34.32	27.20
23	4.33	34.32	25	4.25	34.32	27.24
46	3.51	34.52	50	3.45	34.53	27.48
69	2.99	34.55	75	2.85	34.55	27.56
92	2.34	34.54	100	2.45	34.55	27.59
139	3.01	34.72	150	3.00	34.73	27.69
185	2.97	34.74	200	3.00	34.75	27.71
277	3.30	34.82	300	3.40	34.84	27.74
361	3.49	34.86	400	3.50	34.86	27.75
541	3.46	34.87	600	3.45	34.87	27.76
722	3.47	34.88	800	3.45	34.88	27.76
912	3.42	34.89	1,000	3.40	34.89	27.78
1,406	3.36	34.90	(1,500)	3.35	34.90	27.79

Station 4687; Apr. 10; latitude 50°07.5' N., longitude 47°18' W.; depth 2,834 meters; dynamic height 1,454.611

0	5.00	34.27	0	5.00	34.27	27.12
14	4.93	34.27	25	4.75	34.28	27.15
28	4.71	34.29	50	3.90	34.45	27.38
42	3.99	34.44	75	2.80	34.44	27.47
56	3.86	34.45	100	2.45	34.52	27.57
85	2.35	34.44	150	2.60	34.69	27.69
113	2.49	34.61	200	2.85	34.76	27.73
169	2.64	34.72	300	3.45	34.84	27.78
278	3.47	34.83	400	3.40	34.84	27.74
430	3.37	34.84	600	3.40	34.87	27.77
592	3.41	34.87	800	3.30	34.87	27.78
761	3.31	34.87	1,000	3.30	34.87	27.78
1,216	3.28	34.87	(1,500)	3.25	34.88	27.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4688; Apr. 10; latitude 49°58' N., longitude 46°14' W.; depth 3,110 meters; dynamic height 1,454.744						
0	7.75	34.71	0	7.75	34.71	27.10
23	7.74	34.72	25	7.75	34.72	27.11
45	7.76	34.72	50	7.75	34.72	27.11
67	7.77	34.72	75	7.75	34.72	27.11
89		34.72	100	7.75	34.72	27.11
135	7.76	34.72	150	7.89	34.78	27.15
180	8.02	34.98	200	7.55	34.96	27.33
269	5.82	34.88	300	5.35	34.86	27.54
286	5.52	34.86	400	4.55	34.91	27.68
434	4.23	34.92	600	3.65	34.87	27.74
588	3.68	34.87	800	3.60	34.89	27.76
756	3.63	34.89	1,000	3.55	34.90	27.77
1,212	3.42	34.90	(1,500)	3.35	34.90	27.79
Station 4689; Apr. 11; latitude 49°48' N., longitude 44°51' W.; depth 2,380 meters; dynamic height 1,454.645						
0	6.09	34.17	0	6.09	34.17	26.91
29	6.06	34.18	25	6.05	34.18	26.92
57	4.01	34.38	50	4.50	34.31	27.21
85	4.06	34.61	75	4.05	34.54	27.43
113	3.66	34.62	100	3.80	34.61	27.52
170	4.08	34.78	150	3.95	34.73	27.59
227	4.26	34.87	200	4.20	34.84	27.66
340	3.71	34.85	300	3.85	34.86	27.71
437	3.67	34.88	400	3.70	34.86	27.73
655	3.64	34.90	600	3.65	34.90	27.76
873	3.50	34.89	800	3.55	34.90	27.77
1,094	3.38	34.885	1,000	3.45	34.89	27.77
1,652	3.36	34.93	1,500	3.35	34.91	27.80
Station 4690; Apr. 11; latitude 50°35.5' N., longitude 44°59' W.; depth 4,024 meters; dynamic height 1,454.701						
0	8.44	34.62	0	8.44	34.62	26.93
23	6.31	34.41	25	6.20	34.39	27.06
45	5.64	34.35	50	5.55	34.35	27.12
68	5.31	34.36	75	5.30	34.36	27.15
91	5.28	34.38	100	5.30	34.42	27.20
137	5.55	34.70	150	5.25	34.70	27.43
182	4.40	34.70	200	4.40	34.71	27.53
273	4.40	34.81	300	3.65	34.76	27.65
296	3.66	34.76	400	3.90	34.86	27.71
450	3.94	34.88	600	3.70	34.89	27.75
610	3.71	34.89	800	3.55	34.89	27.76
785	3.56	34.89	1,000	3.45	34.89	27.77
1,262	3.39	34.89	(1,500)	3.35	34.89	27.78
Station 4691; Apr. 11; latitude 50°42' N., longitude 45°54' W.; depth 3,585 meters; dynamic height 1,454.652						
0	6.79	34.33	0	6.79	34.33	26.93
26	6.63	34.34	25	6.65	34.34	26.96
51	5.47	34.36	50	5.50	34.36	27.13
77	5.15	34.40	75	5.20	34.40	27.20
102	3.94	34.50	100	4.00	34.49	27.40
155	3.09	34.60	150	3.10	34.59	27.57
206	3.12	34.67	200	3.10	34.66	27.63
308	3.31		300	3.30	34.77	27.70
414	3.45	34.84	400	3.45	34.83	27.72
616	3.35	34.86	600	3.35	34.86	27.76
817	3.40	34.88	800	3.40	34.88	27.77
1,022	3.35	34.89	1,000	3.35	34.89	27.78
1,539	3.34	34.91	1,500	3.30	34.91	27.81
Station 4692; Apr. 11; latitude 50°47' N., longitude 46°44' W.; depth 2,158 meters; dynamic height 1,454.627						
0	4.94	34.34	0	4.94	34.34	27.18
25	4.79	34.34	25	4.79	34.34	27.19
49	4.45	34.40	50	4.40	34.41	27.30
74	3.54	34.51	75	3.50	34.52	27.48
98	3.06	34.58	100	3.05	34.58	27.56
148	3.90	34.68	150	3.10	34.68	27.64
196	3.20	34.76	200	3.20	34.76	27.70
294	3.46	34.80	300	3.45	34.80	27.70
349	3.48	34.84	400	3.50	34.84	27.73
529	3.38	34.85	600	3.35	34.85	27.75
714	3.30	34.86	800	3.30	34.86	27.77
900	3.33	34.86	1,000	3.30	34.86	27.77
1,377	3.33	34.88	(1,500)	3.30	34.89	27.79
Station 4693; Apr. 11-12; latitude 50°52.5' N., longitude 47°35' W.; depth 2,743 meters; dynamic height 1,454.589						
0	3.74	34.44	0	3.74	34.44	27.38
21	3.60	34.44	25	3.50	34.45	27.42
42	2.89	34.55	50	2.80	34.56	27.57
63	2.70	34.59	75	2.70	34.61	27.62
84	2.68	34.62	100	2.75	34.65	27.65
126	2.94	34.70	150	3.00	34.74	27.70
168	3.02	34.77	200	3.15	34.80	27.73
252	3.36	34.83	(300)	3.40	34.84	27.74
			(400)	3.40	34.85	27.75
			(600)	3.30	34.86	27.77
			(800)	3.30	34.86	27.77
			(1,000)	3.30	34.87	27.78
			(1,500)	3.25	34.88	27.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ _t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4694; Apr. 12; latitude 50°58' N., longitude 48°25' N.; depth 2,740 meters; dynamic height 1,454.581						
0	3.34	34.46	0	3.34	34.46	27.44
24	3.32	34.46	25	3.30	34.46	27.45
47	2.95	34.52	50	2.95	34.53	27.53
71	2.83	34.61	75	2.80	34.61	27.61
94	2.45	34.63	100	2.45	34.64	27.66
141	2.70	34.71	150	2.80	34.72	27.70
188	3.22	34.78	200	3.20	34.79	27.72
282	3.22	34.82	300	3.20	34.83	27.75
418	3.27	34.84	400	3.25	34.84	27.75
629	3.30	34.86	600	3.30	34.86	27.77
838	3.30	34.875	800	3.30	34.87	27.78
1,053	3.27	34.87	1,000	3.25	34.87	27.78
1,597	3.30	34.915	1,500	3.30	34.90	27.80

Station 4695; Apr. 12; latitude 50°59' N., longitude 49°26' W.; depth 1,554 meters; dynamic height 1,454.574

0	3.07	34.46	0	3.07	34.46	27.47
24	2.79	34.48	25	2.80	34.48	27.50
48	2.61	34.57	50	2.60	34.57	27.60
72	2.46	34.60	75	2.45	34.60	27.63
95	2.51	34.65	100	2.50	34.65	27.67
143	2.60	34.70	150	2.65	34.71	27.71
191	2.96	34.77	200	3.00	34.78	27.73
286	3.22	34.83	300	3.25	34.84	27.75
332	3.26	34.85	400	3.35	34.87	27.77
488	3.42	34.875	600	3.35	34.88	27.77
637	3.31	34.875	800	3.30	34.88	27.78
810	3.30	34.88	1,000	3.30	34.88	27.78
1,271	3.29	34.89	(1,500)	3.25	34.90	27.80

Station 4696; Apr. 12; latitude 50°59' N., longitude 49°43' W.; depth 1,122 meters; dynamic height 1,454.618

0	0.61	33.73	0	0.61	33.73	27.06
25	0.74	34.06	25	0.74	34.06	27.33
48	1.50	34.24	50	1.50	34.25	27.43
73	1.51	34.31	75	1.55	34.31	27.47
96	2.01	34.42	100	2.05	34.43	27.53
145	2.27	34.54	150	2.30	34.55	27.61
194	2.58	34.66	200	2.60	34.67	27.68
290	3.23	34.79	300	3.30	34.80	27.72
378	3.47	34.84	400	3.50	34.85	27.74
570	3.47	34.875	600	3.45	34.88	27.76
764	3.36	34.88	800	3.35	34.88	27.77
961	3.30	34.88	(1,000)	3.30	34.88	27.78

Station 4697; Apr. 12; latitude 50°59' N., longitude 49°49' W.; depth 1,035 meters; dynamic height 1,454.658

0	-0.12	33.41	0	-0.12	33.41	26.85
22	0.36	33.76	25	0.40	33.78	27.12
44	0.42	33.94	50	0.60	33.98	27.26
66	1.05	34.12	75	1.20	34.18	27.39
88	1.39	34.26	100	1.60	34.31	27.47
132	2.06	34.42	150	2.15	34.47	27.56
176	2.29	34.53	200	2.50	34.58	27.61
264	2.97	34.68	300	3.15	34.73	27.67
336	3.29	34.77	400	3.45	34.81	27.71
510	3.57	34.85	600	3.60	34.87	27.75
688	3.62	34.895	800	3.55	34.88	27.75
822	3.54	34.88	(1,000)	3.45	34.88	27.76

Observed values			Scaled values			σ _t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4698; Apr. 12; latitude 51°29' N., longitude 50°21' W.; depth 406 meters; dynamic height 1,454.608						
0	-0.27	33.30	0	-0.27	33.30	26.76
17	-0.13	33.63	25	0.30	33.76	27.11
35	1.01	33.88	50	0.45	34.01	27.30
52	0.45	34.03	75	0.70	34.10	27.36
69	0.62	34.08	100	1.20	34.23	27.43
104	1.30	34.26	150	2.10	34.49	27.57
139	1.92	34.46	200	2.60	34.61	27.63
208	2.69	34.62	(300)	2.90	34.74	27.71
274	2.82	34.71	(400)	3.15	34.85	27.77

Station 4699; Apr. 13; latitude 51°29' N., longitude 50°11' W.; depth 685 meters; dynamic height 1,454.582

0	0.47	33.92	0	0.47	33.92	27.23
22	0.47	33.92	25	0.45	33.94	27.24
44	0.56	34.14	50	0.75	34.18	27.42
65	1.38	34.25	75	1.40	34.28	27.46
87	1.40	34.32	100	1.65	34.37	27.52
131	2.12	34.50	150	2.30	34.56	27.62
174	2.47	34.62	200	2.60	34.67	27.68
261	2.97	34.75	300	3.10	34.80	27.74
291	3.08	34.80	400	3.10	34.84	27.77
462	*3.10	34.86	(600)	3.10	34.87	27.80

Station 4700; Apr. 13; latitude 51°28.5' N., longitude 49°55' W.; depth 1,742 meters; dynamic height 1,454.574

0	2.76	34.50	0	2.76	34.50	27.53
25	2.73	34.52	25	2.73	34.52	27.55
50	2.63	34.52	50	2.63	34.52	27.56
75	2.43	34.61	75	2.43	34.61	27.64
100	2.52	34.63	100	2.52	34.63	27.65
150	2.87	34.76	150	2.87	34.76	27.73
200	3.04	34.79	200	3.04	34.79	27.73
300	3.21	34.83	300	3.21	34.83	27.75
366	3.41	34.85	400	3.40	34.86	27.76
549	3.42	34.87	600	3.40	34.87	27.77
733	3.36	34.88	800	3.35	34.88	27.77
921	3.31	34.87	1,000	3.30	34.87	27.78
1,399	3.33	34.91	1,500	3.30	34.91	27.81

Station 4701; Apr. 13; latitude 51°27' N., longitude 49°15' W.; depth 2,561 meters; dynamic height 1,454.590

0	1.55	34.18	0	1.55	34.18	27.36
25	1.64	34.22	25	1.64	34.22	27.40
49	1.86	34.27	50	1.85	34.27	27.42
73	2.05	34.48	75	2.05	34.49	27.58
97	2.20	34.55	100	2.20	34.56	27.63
147	2.67	34.67	150	2.70	34.68	27.67
196	2.85	34.71	200	2.85	34.71	27.69
293	3.13	34.80	300	3.10	34.80	27.74
323	3.14	34.81	400	3.25	34.85	27.76
490	3.34	34.87	600	3.35	34.87	27.77
662	3.34	34.87	800	3.30	34.88	27.78
839	3.33	34.89	1,000	3.30	34.89	27.79
1,299	34.89		1,500	3.30	34.89	27.79

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4702; Apr. 13; latitude 51°26' N., longitude 48°24' W.; depth 3,200 meters; dynamic height 1,454.685

0	6.25	34.44	0	6.25	34.44	27.10
25	6.25	34.44	25	6.25	34.44	27.10
49	6.28	34.43	50	6.25	34.44	27.10
74	5.86	34.64	75	5.85	34.64	27.31
99	5.46	34.66	100	5.45	34.66	27.37
149	5.30	34.70	150	5.30	34.70	27.42
198	4.76	34.70	200	4.75	34.70	27.49
297	4.27	34.84	300	4.25	34.84	27.65
432	2.77	34.785	400	3.20	34.80	27.73
618	3.49	34.87	600	3.45	34.87	27.76
787	3.59	34.89	800	3.60	34.89	27.76
986	3.47	34.88	1,000	3.45	34.88	27.76
1,487	3.37	34.89	1,500	3.35	34.89	27.78

Station 4703; Apr. 14; latitude 51°26' N., longitude 47°33' W.; depth 3,475 meters; dynamic height 1,454.708

0	8.92		0	8.92	34.67	26.90
22	8.91	34.67	25	8.90	34.67	26.90
44	8.89	34.67	50	8.80	34.67	26.91
66	8.13	34.60	75	6.95	34.53	27.07
88	5.17	34.41	100	5.10	34.48	27.27
132	4.97	34.66	150	4.75	34.67	27.47
176	4.61	34.68	200	4.50	34.72	27.53
264	4.42	34.81	300	4.05	34.81	27.65
353	3.49	34.80	400	3.55	34.82	27.71
531	3.73	34.87	600	3.70	34.88	27.74
710	3.65	34.89	800	3.60	34.88	27.75
891	3.53	34.87	1,000	3.50	34.87	27.76
1,354	3.37	34.88	(1,500)	3.30	34.89	27.79

Station 4704; Apr. 14; latitude 51°27' N., longitude 46°45' W.; depth 4,207 meters; dynamic height 1,454.692

0	7.18	34.44	0	7.18	34.44	26.97
24	7.16	34.44	25	7.15	34.44	26.98
49	7.12	34.44	50	7.10	34.44	26.98
73	4.97	34.45	75	4.95	34.46	27.28
98	4.72	34.57	100	4.70	34.57	27.39
146	4.52	34.68	150	4.50	34.69	27.50
194	3.99	34.72	200	3.95	34.73	27.59
292	4.15	34.85	300	4.15	34.85	27.67
384	3.80	34.86	400	3.80	34.86	27.72
573	3.74	34.88	600	3.75	34.88	27.73
761	3.59	34.87	800	3.60	34.87	27.75
952	3.53	34.865	1,000	3.50	34.87	27.76
1,431	3.35	34.88	(1,500)	3.35	34.88	27.77

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4705; Apr. 14; latitude 51°23.5' N., longitude 45°53' W.; depth 3,841 meters; dynamic height 1,454.665

0	6.78	34.42	0	6.78	34.42	27.01
22	6.72	34.42	25	6.70	34.42	27.03
45	6.68	34.41	50	6.55	34.40	27.03
67	5.12	34.38	75	5.05	34.41	27.23
90	4.88	34.52	100	4.70	34.52	27.35
134	3.60	34.53	150	3.70	34.60	27.52
178	3.86	34.72	200	3.80	34.75	27.63
268	3.62	34.81	300	3.75	34.84	27.70
324	3.78	34.86	400	3.80	34.88	27.73
491	3.79	34.89	600	3.75	34.90	27.75
663	3.70	34.90	800	3.60	34.90	27.77
842	3.54	34.96	1,000	3.50	34.90	27.78
1,311	3.38	34.885	(1,500)	3.30	34.89	27.79

Station 4706; Apr. 14; latitude 51°20' N., longitude 45°00' W.; depth 4,024 meters; dynamic height 1,454.678

0	5.68	34.32	0	5.68	34.32	27.08
26	5.33	34.31	25	5.35	34.31	27.11
51	5.31	34.32	50	5.30	34.32	27.12
77	5.20	34.35	75	5.25	34.35	27.15
102	4.51	34.52	100	4.55	34.50	27.35
153	4.08	34.72	150	4.10	34.71	27.57
204	3.87	34.78	200	3.90	34.78	27.64
306	3.89	34.83	300	3.90	34.83	27.68
338	4.11	34.89	400	4.00	34.89	27.72
519	3.70	34.88	600	3.65	34.88	27.74
709	3.59	34.88	800	3.55	34.875	27.75
910	3.51	34.87	1,000	3.50	34.875	27.76
1,450	3.39	34.89	1,500	3.40	34.89	27.78

Station 4707; Apr. 14; latitude 52°06' N., longitude 45°29' W.; depth 4,207 meters; dynamic height 1,454.813

0		34.87	0	9.80	34.86	26.90
23	9.78	34.86	25	9.80	34.86	26.90
44	9.76	34.86	50	9.60	34.85	26.92
67	9.12	34.83	75	8.70	34.77	27.01
89	8.03	34.68	100	8.00	34.69	27.05
134	7.88	34.75	150	7.80	34.79	27.16
178	7.61	34.83	200	7.20	34.80	27.25
267	5.60	34.70	300	5.55	34.77	27.45
292	5.55	34.76	400	5.30	34.90	27.58
449	5.04	34.93	600	3.65	34.82	27.70
615	3.55	34.82	800	3.70	34.87	27.74
794	3.66	34.87	1,000	3.60	34.87	27.75
1,286	3.49	34.88	(1,500)	3.45	34.89	27.77

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰		Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4708; Apr. 15; latitude 52°03.5' N., longitude 46°20' W.; depth 3,987 meters; dynamic height 1,454.833							
0	10.41	34.95		0	10.41	34.95	26.86
25	10.39	34.95		25	10.39	34.95	26.86
49	10.39	34.96		50	10.40	34.96	26.87
74	10.35	34.945		75	10.35	34.95	26.87
98	10.12	34.91		100	10.10	34.91	26.89
148	8.99	34.86		150	8.95	34.86	27.04
197	8.78	34.98		200	8.75	34.98	27.16
295	4.06	34.56		300	4.05	34.57	27.46
378	5.20	34.87		400	5.00	34.87	27.60
575	3.59	34.83		600	3.60	34.83	27.71
778	3.79	34.88		800	3.80	34.88	27.73
979	3.62	34.88		1,000	3.60	34.88	27.75
1,494	3.41	34.88		1,500	3.40	34.88	27.77
Station 4709; Apr. 15; latitude 51°57.5' N., longitude 47°09' W.; depth 3,731 meters; dynamic height 1,454.738							
0	9.56	34.84		0	9.56	34.84	26.92
26	9.55	34.84		25	9.55	34.84	26.92
50	9.52	34.84		50	9.50	34.84	26.93
76	9.53	34.86		75	9.50	34.86	26.95
100	7.18	34.58		100	7.20	34.58	27.08
151	4.37	34.48		150	4.35	34.48	27.35
202	5.16	34.80		200	5.15	34.80	27.52
302	5.02	34.92		300	5.05	34.92	27.63
402	4.11	34.86		400	4.15	34.86	27.68
602	3.85	34.88		600	3.85	34.88	27.72
802	3.72	34.915		800	3.75	34.91	27.76
1,008	3.57	34.89		1,000	3.60	34.89	27.76
1,534	3.41	34.89		1,500	3.40	34.89	27.78
Station 4710; Apr. 15; latitude 51°57' N., longitude 48°00' W.; depth 3,603 meters; dynamic height 1,454.683							
0	8.71	34.68		0	8.71	34.68	26.93
24	6.47	34.44		25	6.40	34.43	27.07
47	6.15	34.41		50	6.15	34.41	27.09
71	6.09	34.42		75	6.00	34.44	27.13
94	5.26	34.59		100	5.20	34.61	27.37
141	4.82	34.69		150	4.75	34.70	27.49
188	4.43	34.75		200	4.40	34.77	27.58
282	4.33	34.86		300	4.25	34.86	27.67
334	4.05	34.86		400	4.00	34.87	27.71
509	3.89	34.90		600	3.80	34.90	27.75
690	3.69	34.89		800	3.60	34.89	27.76
881	3.57	34.89		1,000	3.55	34.90	27.77
1,393	3.42	34.90		(1,500)	3.40	34.90	27.79
Station 4711; Apr. 15; latitude 51°56' N., longitude 48°48' W.; depth 3,292 meters; dynamic height 1,454.674							
0	5.94	34.42		0	5.94	34.42	27.12
25	5.85	34.43		25	5.85	34.42	27.14
48	5.81	34.42		50	5.80	34.42	27.14
73	4.51	34.41		75	4.50	34.42	27.30
97	5.03	34.62		100	5.00	34.62	27.40
146	4.96	34.64		150	4.90	34.64	27.42
194	3.69	34.62		200	3.65	34.63	27.54
291	3.36	34.72		300	3.35	34.72	27.65
395	3.10	34.75		400	3.10	34.75	27.70
598	3.33	34.84		600	3.35	34.84	27.74
805	3.34	34.88		800	3.35	34.88	27.77
1,016	3.29	34.87		1,000	3.30	34.87	27.78
1,564	3.27	34.87		1,500	3.25	34.87	27.78
Station 4712; Apr. 15; latitude 51°56.5' N., longitude 49°40' W.; depth 2,743 meters; dynamic height 1,454.580							
0	3.52	34.54		0	3.52	34.54	27.49
25	3.48	34.54		25	3.48	34.54	27.49
49	3.41	34.54		50	3.40	34.54	27.50
74	3.11	34.61		75	3.10	34.61	27.59
99	3.19	34.71		100	3.20	34.71	27.66
147	3.11	34.74		150	3.10	34.74	27.69
196	3.22	34.81		200	3.20	34.81	27.74
295	3.50	34.88		300	3.50	34.88	27.76
391	3.48	34.86		400	3.40	34.86	27.76
587	3.31	34.86		600	3.30	34.86	27.77
785	3.35	34.86		800	3.35	34.87	27.77
983	3.27	34.88		1,000	3.30	34.88	27.78
1,484	3.33	34.90		1,500	3.30	34.90	27.80
Station 4713; Apr. 15-16; latitude 51°56.5' N., longitude 50°21' W.; depth 2,012 meters; dynamic height 1,454.577							
0	3.08	34.53		0	3.08	34.53	27.52
22	2.61	34.54		25	2.55	34.54	27.58
44	2.20	34.54		50	2.20	34.55	27.62
66	2.18	34.58		75	2.15	34.60	27.66
88	2.21	34.61		100	2.30	34.64	27.68
132	2.66	34.71		150	2.85	34.75	27.72
176	3.15	34.81		200	3.35	34.82	27.73
264	3.48	34.83		300	3.55	34.85	27.73
337	3.55	34.85		400	3.50	34.86	27.75
525	3.31	34.88		600	3.30	34.88	27.78
727	3.30	34.88		800	3.30	34.88	27.78
908	3.32	34.88		1,000	3.30	34.88	27.78
1,365	3.35	34.88		(1,500)	3.35	34.89	27.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ _t

Station 4714; Apr. 16; latitude 51°56.5' N., longitude 50°44' W.; depth 622 meters; dynamic height 1,454.630

0	0.92	33.82	0	0.92	33.82	27.13
20	1.00	33.89	25	1.00	33.92	27.20
41	0.90	34.06	50	1.05	34.16	27.39
61	1.38	34.27	75	1.50	34.31	27.48
81	1.59	34.33	100	1.70	34.38	27.51
122	1.82	34.44	150	1.95	34.50	27.60
162	2.03	34.52	200	2.35	34.59	27.63
243	2.75	34.66	300	3.45	34.78	27.68
306	3.49	34.79	400	3.40	34.82	27.73
507	3.29	34.84	(600)	3.25	34.85	27.76

Station 4715; Apr. 16; latitude 51°58' N., longitude 51°30' W.; depth 352 meters; dynamic height 1,454.712

0	-0.65	33.06	0	-0.65	33.06	26.59
24	-0.84	33.19	25	-0.85	33.20	26.71
47	-1.14	33.38	50	-1.15	33.40	26.89
71	-1.12	33.52	75	-1.05	33.54	26.99
95	-0.44	33.69	100	-0.30	33.73	27.11
142	0.72	34.04	150	0.85	34.07	27.33
189	1.26	34.24	200	1.40	34.28	27.46
284	2.47	34.59	(300)	2.70	34.65	27.65

Station 4716; Apr. 16; latitude 52°26' N., longitude 51°36' W.; depth 320 meters; dynamic height 1,454.661

0	0.35	33.84	0	0.35	33.84	27.17
23	0.65	33.89	25	0.65	33.89	27.19
46	0.66	33.92	50	0.65	33.92	27.22
69	0.67	33.95	75	0.65	33.97	27.26
93	0.40	34.04	100	0.45	34.06	27.34
139	0.99	34.18	150	1.15	34.22	27.43
185	1.61	34.35	200	1.80	34.40	27.53
278	2.75	34.65	(300)	3.00	34.71	27.68

Station 4717; Apr. 16; latitude 52°26.5' N., longitude 51°22' W.; depth 622 meters; dynamic height 1,454.637

0	-0.15	33.75	0	-0.15	33.75	27.13
23	0.45	33.90	25	0.50	33.90	27.21
46	0.61	33.92	50	0.60	33.92	27.22
69	0.69	33.93	75	0.75	33.95	27.24
91	1.06	34.17	100	1.20	34.22	27.43
137	1.81	34.43	150	2.05	34.49	27.58
183	2.56	34.64	200	2.70	34.68	27.67
274	3.23	34.79	300	3.40	34.81	27.72
324	3.50	34.83	400	3.50	34.85	27.74
518	3.32	34.86	(600)	3.30	34.87	27.78

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ _t

Station 4718; Apr. 16; latitude 52°28' N., longitude 51°06' W., depth 1,500 meters; dynamic height 1,454.608

0	0.97	33.94	0	0.97	33.94	27.21
24	0.88	33.95	25	0.85	33.95	27.23
47	1.13	34.06	50	1.20	34.09	27.32
70	1.73	34.30	75	1.95	34.35	27.48
94	2.89	34.58	100	2.85	34.58	27.58
141	2.61	34.57	150	2.60	34.59	27.61
188	2.72	34.69	200	2.80	34.71	27.69
282	3.14	34.81	300	3.15	34.82	27.75
314	3.16	34.81	400	3.30	34.85	27.76
486	3.32	34.86	600	3.30	34.87	27.78
667	3.32	34.87	800	3.30	34.88	27.78
843	3.32	34.88	1,000	3.30	34.88	27.78
1,252	3.29	34.88	(1,500)	3.25	34.88	27.78

Station 4719; Apr. 16; latitude 52°31' N., longitude 50°25' W.; depth 2,506 meters; dynamic height 1,454.574

0	2.05	34.26	0	2.05	34.26	27.40
26	2.40	34.38	25	2.40	34.38	27.46
50	2.13	34.44	50	2.15	34.44	27.53
76	2.39	34.58	75	2.40	34.58	27.62
101	2.67	34.66	100	2.65	34.66	27.67
152	3.02	34.76	150	3.00	34.76	27.72
203	3.20	34.80	200	3.20	34.80	27.73
304	3.26	34.84	300	3.25	34.84	27.75
374	3.25	34.85	400	3.30	34.85	27.76
561	3.32	34.865	600	3.30	34.87	27.78
750	3.27	34.87	800	3.30	34.87	27.78
946	3.26	34.87	1,000	3.25	34.87	27.78
1,450	3.35	34.90	(1,500)	3.35	34.90	27.79

Station 4720; Apr. 16; latitude 52°35.5' N., longitude 49°32' W.; depth 3,255 meters; dynamic height 1,454.603

0	3.52	34.44	0	3.52	34.44	27.41
23	3.51	34.44	25	3.50	34.44	27.41
45	2.90	34.52	50	2.90	34.55	27.56
67	2.93	34.62	75	3.00	34.64	27.62
89	3.05	34.66	100	3.00	34.66	27.64
134	2.55	34.66	150	2.65	34.68	27.68
179	2.85	34.73	200	2.95	34.76	27.72
268	3.15	34.80	300	3.15	34.81	27.74
396	3.22	34.82	400	3.25	34.82	27.74
592	3.34	34.84	600	3.35	34.84	27.74
789	3.38	34.86	800	3.40	34.86	27.76
991	3.33	34.87	1,000	3.35	34.87	27.77
1,504	3.40	34.90	1,500	3.40	34.90	27.79

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4721; Apr. 17; latitude 52°40.5' N., longitude 48°43' W.; depth 3,658 meters; dynamic height 1,454.736						
0	5.98	34.43	0	5.98	34.43	27.12
23	5.98	34.43	25	6.00	34.43	27.12
47	5.99	34.43	50	6.00	34.44	27.13
70	5.81	34.58	75	5.75	34.58	27.27
94	5.24	34.60	100	5.20	34.60	27.36
141	1.96	34.60	150	4.95	34.60	27.38
188	4.90	34.62	200	4.85	34.63	27.42
282	4.32	34.67	300	4.20	34.68	27.53
373	3.76	34.73	400	3.70	34.75	27.64
559	3.53	34.83	600	3.55	34.84	27.72
747	3.54	34.86	800	3.55	34.86	27.74
940	3.47	34.86	1,000	3.45	34.86	27.75
1,430	3.40	34.86	(1,500)	3.40	34.86	27.76

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4725; Apr. 18; latitude 53°35' N., longitude 46°32' W.; depth 3,749 meters; dynamic height 1,454.655						
0	4.97	34.55	0	4.97	34.55	27.34
29	4.93	34.55	25	4.95	34.55	27.34
58	4.92	34.55	50	4.95	34.55	27.34
86	4.39	34.64	75	4.55	34.62	27.45
114	4.33	34.64	100	4.35	34.64	27.48
172	4.27	34.69	150	4.30	34.67	27.52
229	3.69	34.68	200	3.95	34.69	27.56
344	3.77	34.82	300	3.75	34.78	27.65
451	3.82	34.87	400	3.80	34.85	27.71
678	3.62	34.88	600	3.75	34.88	27.73
905	*3.49	34.89	800	3.55	34.89	27.76
1,131	3.44	34.89	1,000	3.45	34.89	27.77
1,697	3.41	34.915	1,500	3.40	34.91	27.80

Station 4722; Apr. 17; latitude 52°43.5' N., longitude 47°51' W.; depth 4,006 meters; dynamic height 1,454.731

0	5.47	34.44	0	5.47	34.44	27.20
28	5.47	34.44	25	5.45	34.44	27.20
54	5.46	34.46	50	5.45	34.45	27.21
82	5.42	34.48	75	5.45	34.47	27.23
108	5.06	34.58	100	5.20	34.56	27.33
164	4.97	34.62	150	5.00	34.61	27.39
218	4.76	34.64	200	4.85	34.64	27.43
326	3.44	34.64	300	3.70	34.64	27.55
410	3.27	34.66	400	3.30	34.66	27.61
624	3.91	34.89	600	3.90	34.88	27.72
846	3.66	34.88	800	3.75	34.88	27.73
1,062	3.54	34.89	1,000	3.55	34.89	27.76
1,629	3.40	34.90	1,500	3.45	34.90	27.78

Station 4726; Apr. 18; latitude 53°28.5' N., longitude 47°29' W.; depth 3,749 meters; dynamic height 1,454.656

0	4.60	34.58	0	4.60	34.58	27.40
28	4.56	34.58	25	4.55	34.58	27.41
52	4.56	34.58	50	4.55	34.58	27.41
78	4.15	34.63	75	4.20	34.63	27.49
104	3.81	34.62	100	3.85	34.62	27.52
155	3.50	34.65	150	3.55	34.65	27.57
206	3.24	34.64	200	3.25	34.64	27.59
310	3.76	34.78	300	3.70	34.77	27.66
401	3.92	34.88	400	3.95	34.88	27.71
601	3.72	34.88	600	3.70	34.88	27.74
800	3.54	34.87	800	3.55	34.87	27.75
1,003	3.46	34.86	1,000	3.45	34.86	27.75
1,514	3.38	34.87	1,500	3.40	34.87	27.77

Station 4723; Apr. 17; latitude 52°47.5' N., longitude 46°58' W.; depth 4,024 meters; dynamic height 1,454.707

0	7.14	34.54	0	7.14	34.54	27.05
26	6.96	34.52	25	6.95	34.52	27.07
50	7.14	34.56	50	7.15	34.56	27.07
76	6.94	34.65	75	6.95	34.65	27.17
101	6.74	34.76	100	6.75	34.76	27.29
152	5.02	34.62	150	5.05	34.62	27.39
202	4.64	34.68	200	4.65	34.67	27.48
303	4.46	34.82	300	4.35	34.81	27.62
290	4.33	34.80	400	4.20	34.87	27.69
446	4.15	34.89	600	3.95	34.92	27.75
611	3.90	34.92	800	3.70	34.90	27.76
785	3.74	34.90	1,000	3.60	34.90	27.77
1,258	3.47	34.89	(1,500)	3.40	34.89	27.78

Station 4727; Apr. 18; latitude 53°18' N., longitude 48°41' W.; depth 3,660 meters; dynamic height 1,454.656

0	5.69	34.44	0	5.69	34.44	27.17
25	5.67	34.44	25	5.67	34.44	27.17
51	4.18	34.58	50	4.20	34.58	27.45
76	3.98	34.56	75	4.00	34.56	27.46
102	3.87	34.64	100	3.85	34.63	27.52
152	3.50	34.65	150	3.50	34.65	27.58
203	3.75	34.73	200	3.70	34.72	27.62
305	4.06	34.86	300	4.05	34.86	27.69
396	3.82	34.86	400	3.85	34.86	27.71
599	3.67	34.885	600	3.65	34.88	27.74
804	3.55	34.88	800	3.55	34.88	27.75
1,069	3.48	34.87	1,000	3.45	34.87	27.76
1,529	3.39	34.89	1,500	3.40	34.89	27.78

Station 4724; Apr. 17; latitude 52°51' N., longitude 46°09' W.; depth 3,932 meters; dynamic height 1,454.845

0	9.53	34.93	0	9.53	34.93	26.99
28	9.55	34.95	25	9.55	34.95	27.01
56	9.39	34.99	50	9.40	34.98	27.05
83	9.42	35.04	75	9.40	35.03	27.09
110	9.40	35.06	100	9.40	35.05	27.11
166	9.71	35.12	150	9.65	35.10	27.11
222	9.75	35.15	200	9.75	35.14	27.12
332	6.47	34.82	300	7.40	34.91	27.31
412	5.47	34.82	400	5.60	34.82	27.48
629	4.00	34.88	600	4.10	34.88	27.70
854	*3.84	34.89	800	3.85	34.89	27.76
1,083	3.58	34.90	1,000	3.65	34.90	27.76
1,668	3.41	34.885	1,500	3.45	34.89	27.77

Station 4728; Apr. 19; latitude 53°11' N., longitude 49°40' W.; depth 3,493 meters; dynamic height 1,454.631

0	4.77	34.41	0	4.77	34.41	27.26
25	4.53	34.43	25	4.53	34.43	27.29
50	3.99	34.51	50	3.99	34.51	27.42
75	3.82	34.52	75	3.82	34.52	27.44
100	3.81	34.61	100	3.81	34.61	27.52
150	3.43	34.66	150	3.43	34.66	27.59
199	3.21	34.67	200	3.20	34.67	27.63
299	3.57	34.80	300	3.55	34.80	27.69
341	3.51	34.80	400	3.40	34.81	27.72
520	3.28	34.85	600	3.30	34.86	27.77
705	3.33	34.86	800	3.30	34.86	27.77
893	3.32	34.86	1,000	3.30	34.86	27.77
1,383	3.30	34.86	(1,500)	3.30	34.87	27.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4729; Apr. 19; latitude 53°02.5' N., longitude 50°37' W.; depth 3,198 meters; dynamic height 1,454.619						
0	0.98	33.86	0	0.98	33.86	27.15
25	1.16	33.97	25	1.16	33.97	27.23
51	1.69	34.24	50	1.70	34.23	27.39
76	1.82	34.34	75	1.80	34.33	27.47
102	2.42	34.58	100	2.35	34.47	27.54
152	3.01	34.75	150	3.00	34.55	27.55
204	3.13	34.78	200	3.10	34.77	27.72
306	3.18	34.82	300	3.15	34.82	27.75
414	3.27	34.84	400	3.30	34.84	27.75
616	3.25	34.85	600	3.25	34.85	27.76
814	3.23	34.86	800	3.25	34.86	27.77
1,022	3.23	34.86	1,000	3.25	34.86	27.77
1,549	3.35	34.89	1,500	3.35	34.89	27.78

Station 4730; Apr. 19; latitude 52°57.5' N., longitude 51°18' W., depth 2,103 meters; dynamic height 1,454.583

0	0.65	33.82	0	0.65	33.82	27.14
25	2.06	34.30	25	2.06	34.30	27.43
50	2.64	34.50	50	2.64	34.50	27.54
75	2.82	34.55	75	2.82	34.55	27.56
101	2.66	34.63	100	2.65	34.63	27.64
151	2.72	34.71	150	2.70	34.71	27.70
201	3.07	34.78	200	3.05	34.78	27.72
302	3.22	34.83	300	3.20	34.83	27.75
389	3.32	34.86	400	3.35	34.86	27.76
586	3.32	34.87	600	3.30	34.87	27.78
783	*3.26	34.875	800	3.25	34.87	27.78
980	3.27	34.875	1,000	3.25	34.88	27.78
1,475	3.29	34.90	1,500	3.30	34.90	27.80

Station 4731; Apr. 19; latitude 52°55.5' N., longitude 51°55' W.; depth 622 meters; dynamic height 1,454.670

0	-0.62	33.16	0	-0.62	33.16	26.66
24	-0.77	33.26	25	-0.75	33.27	26.67
48	-0.63	33.67	50	-0.60	33.70	27.10
72	0.08	33.93	75	0.15	33.95	27.27
96	0.37	34.05	100	0.40	34.07	27.36
144	1.25	34.26	150	1.35	34.28	27.46
191	2.01	34.45	200	2.15	34.48	27.56
287	2.83	34.68	300	2.90	34.70	27.68
328	3.03	34.75	400	3.25	34.81	27.73
514	3.37	34.86	(600)	3.35	34.87	27.77

Station 4732; Apr. 19; latitude 52°54.5' N., longitude 52°04' W.; depth 366 meters; dynamic height 1,454.690

0	-0.62	33.12	0	-0.62	33.12	26.63
25	-0.75	33.19	25	-0.75	33.19	26.70
51	-0.58	33.63	50	-0.60	33.61	27.03
76	0.00	33.90	75	0.00	33.90	27.24
101	0.48	34.06	100	0.45	34.05	27.33
151	1.28	34.27	150	1.25	34.27	27.47
202	1.79	34.40	200	1.75	34.40	27.53
303	2.43	34.56	300	2.40	34.56	27.61

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4733; Apr. 19; latitude 53°21' N., longitude 52°25' W.; depth 430 meters; dynamic height 1,454.613						
0	-0.37	33.66	0	-0.37	33.66	27.06
26	0.98	34.03	25	1.00	34.02	27.28
51	1.12	34.13	50	1.10	34.12	27.36
77	1.22	34.20	75	1.20	34.19	27.40
102	1.42	34.32	100	1.35	34.31	27.49
155	2.32	34.56	150	2.25	34.54	27.60
206	2.84	34.69	200	2.80	34.67	27.66
308	3.27	34.82	300	3.25	34.81	27.73
391	3.32	34.84	(400)	3.30	34.84	27.75

Station 4734; Apr. 19; latitude 53°25' N., longitude 52°06' W.; depth 1,188 meters; dynamic height 1,454.586

0	1.26	34.11	0	1.26	34.11	27.34
25	1.32	34.14	25	1.32	34.14	27.35
50	1.65	34.28	50	1.65	34.28	27.44
75	1.71	34.32	75	1.71	34.32	27.47
101	2.22	34.52	100	2.20	34.52	27.60
150	2.92	34.74	150	2.90	34.74	27.71
201	3.08	34.80	200	3.10	34.80	27.74
302	3.25	34.845	300	3.25	34.84	27.75
380	3.25	34.85	400	3.25	34.85	27.76
579	*3.24	34.86	(600)	3.25	34.86	27.77
			(800)	3.20	34.86	27.78
			(1,000)	3.20	34.87	27.79

Station 4735; Apr. 19-20; latitude 53°28.5' N. longitude 51°50' W.; depth 1,920 meters; dynamic height 1,454.597

0	1.87	34.295	0	1.87	34.29	27.43
26	1.87	34.29	25	1.85	34.29	27.43
51	1.80	34.32	50	1.80	34.32	27.47
77	2.60	34.64	75	2.60	34.63	27.64
102	2.71	34.69	100	2.70	34.68	27.67
153	3.09	34.79	150	3.10	34.78	27.72
204	3.24	34.82	200	3.25	34.82	27.74
306	3.20	34.82	300	3.20	34.82	27.75
380	3.25	34.84	400	3.25	34.84	27.75
559	3.27	34.84	600	3.30	34.85	27.76
730		34.855	800	3.25	34.85	27.76
930	3.23	34.85	1,000	3.25	34.85	27.76
1,463	3.35	34.89	1,500	3.35	34.89	27.78

Station 4736; Apr. 20; latitude 53°37.5' N., longitude 51°10' W.; depth 2,834 meters; dynamic height, 1,454.586

0	1.62	34.17	0	1.62	34.17	27.36
22	1.63	34.17	25	1.65	34.19	27.37
45	1.77	34.30	50	1.85	34.33	27.46
67	2.03	34.42	75	2.30	34.49	27.56
90	2.59	34.67	100	2.70	34.70	27.69
134	2.96	34.76	150	3.05	34.78	27.72
179	3.13	34.80	200	3.15	34.82	27.75
269	3.23	34.84	300	3.25	34.84	27.75
351	3.22	34.85	400	3.25	34.85	27.76
521	3.26	34.86	600	3.30	34.86	27.77
687		34.865	800	3.25	34.87	27.78
879	3.25	34.87	1,000	3.25	34.88	27.78
1,391	3.32	34.89	(1,500)	3.35	34.89	27.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰		Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4737; Apr. 20; latitude 53°50.5' N., longitude 50°16' W.; depth 3,365 meters; dynamic height 1,454.615							
0	3.95	34.56		0	3.95	34.56	27.46
22	3.94	34.57		25	3.95	34.57	27.47
44	3.85	34.58		50	3.70	34.59	27.51
67	3.34	34.64		75	3.35	34.65	27.59
89	3.32	34.65		100	3.30	34.65	27.60
133	3.23	34.65		150	3.25	34.67	27.62
177	3.36	34.70		200	3.40	34.73	27.65
266	3.41	34.80		300	3.30	34.79	27.71
340	3.13	34.78		400	3.25	34.80	27.72
536	3.42	34.85		600	3.45	34.86	27.75
750	3.46	34.86		800	3.40	34.87	27.77
949	3.38	34.88		1,000	3.40	34.88	27.77
1,473	3.30	34.87		1,500	3.30	34.87	27.78
Station 4738; Apr. 20; latitude 53°59' N., longitude 49°19' W.; depth 3,676 meters; dynamic height 1,454.620							
0	4.58	34.47		0	4.58	34.47	27.32
26	4.61	34.48		25	4.60	34.48	27.32
52	3.93	34.56		50	3.95	34.56	27.46
79	3.86	34.58		75	3.90	34.58	27.48
104	3.49	34.62		100	3.55	34.62	27.55
157	3.26	34.66		150	3.30	34.66	27.61
209	3.27	34.73		200	3.25	34.72	27.66
313	3.54	34.84		300	3.50	34.83	27.72
393	*3.54	34.86		400	3.55	34.86	27.74
602	3.34	34.86		600	3.35	34.86	27.76
821	*3.30	34.87		800	3.30	34.86	27.77
1,032	3.33	34.87		1,000	3.35	34.87	27.77
1,570	3.23	34.87		1,500	3.25	34.87	27.78
Station 4739; Apr. 20; latitude 54°07' N., longitude 48°24' W.; depth 3,841 meters; dynamic height 1,454.654							
0	4.57	34.55		0	4.57	34.55	27.39
28	4.55	34.56		25	4.55	34.56	27.40
55	4.39	34.62		50	4.45	34.61	27.45
83	4.18	34.61		75	4.25	34.61	27.47
109	4.08	34.64		100	4.15	34.63	27.49
165	3.94	34.70		150	3.95	34.68	27.55
220	4.20	34.78		200	4.15	34.75	27.59
329	3.86	34.80		300	3.90	34.80	27.66
382	3.92	34.84		400	3.90	34.85	27.70
576	3.75	34.88		600	3.75	34.88	27.73
773	3.53	34.88		800	3.50	34.88	27.76
979	3.48	34.89		1,000	3.50	34.89	27.77
1,518	3.38	34.88		1,500	3.40	34.88	27.77
Station 4740; Apr. 20-21; latitude 54°15' N., longitude 47°33' W.; depth 3,749 meters; dynamic height 1,454.619							
0	4.16	34.63		0	4.16	34.62	27.49
24	4.16	34.62		25	4.15	34.62	27.49
48	4.16	34.63		50	4.15	34.63	27.49
72	3.70	34.64		75	3.65	34.64	27.55
95	3.46	34.66		100	3.45	34.66	27.59
144	3.36	34.68		150	3.35	34.69	27.62
192	3.37	34.72		200	3.35	34.73	27.65
287	3.42	34.79		300	3.45	34.80	27.70
404	3.51	34.82		400	3.50	34.82	27.72
618	3.55	34.88		600	3.55	34.88	27.75
843	3.48	34.88		800	3.50	34.88	27.76
1,060	3.40	34.875		1,000	3.40	34.88	27.77
1,612	3.14	34.90		1,500	3.25	34.89	27.79
Station 4741; Apr. 29; latitude 47°16' N., longitude 49°14' W.; depth 91 meters; dynamic height 971.042							
0	1.24	32.82		0	1.24	32.82	26.30
26	0.50	32.82		25	0.50	32.82	26.34
52	0.35	32.84		50	0.40	32.84	26.37
78	-0.50	33.22		75	-0.40	33.17	26.67
Station 4742; Apr. 29; latitude 47°22' N., longitude 48°47' W.; depth 139 meters; dynamic height 971.036							
0	1.23	32.87		0	1.23	32.87	26.34
25	0.33	32.88		25	0.33	32.88	26.40
49	0.25	32.88		50	0.25	32.89	26.41
74	-0.67	33.19		75	-0.70	33.20	26.71
98	-0.83			100	-0.85	33.35	26.82
128	-0.02	33.51					
Station 4743; Apr. 29; latitude 47°28.5' N., longitude 48°26' W.; depth 174 meters; dynamic height 971.030							
0	1.07	32.89		0	1.07	32.89	26.37
25	-0.07	32.88		25	-0.07	32.88	26.42
50	-0.33	32.94		50	-0.33	32.94	26.48
75	-0.99	33.21		75	-0.99	33.21	26.73
99	-0.29	33.39		100	-0.30	33.39	26.84
149	0.68	33.78		150	0.70	33.78	27.10
Station 4744; Apr. 29; latitude 47°34' N., longitude 48°04' W.; depth 218 meters; dynamic height 971.019							
0	0.86	32.94		0	0.86	32.94	26.43
25	-0.32	32.98		25	-0.32	32.98	26.51
50	-0.96	33.15		50	-0.96	33.15	26.68
75	-1.02	33.26		75	-1.02	33.26	26.76
100	-0.61	33.41		100	-0.61	33.41	26.87
151	0.91			150	0.90	33.76	27.08
201	1.51	34.13		200	1.50	34.13	27.33
Station 4745; Apr. 29; latitude 47°41.5' N., longitude 47°32' W.; depth 315 meters; dynamic height 970.957							
0	1.38	33.39		0	1.38	33.39	26.75
25	1.17	33.56		25	1.17	33.56	26.90
49	0.71	33.57		50	0.70	33.57	26.94
74	-0.05	33.72		75	-0.05	33.72	27.10
99	0.47	33.86		100	0.50	33.86	27.18
148	1.54	34.16		150	1.55	34.16	27.35
197	1.76	34.32		200	1.75	34.32	27.47
286	2.39	34.48		(300)	2.50	34.50	27.55

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4746; Apr. 30; latitude 47°48.5' N., longitude 46°54' W.; depth 646 meters; dynamic height 970.878						
0	2.44	34.14	0	2.44	34.14	27.26
22	2.33	34.20	25	2.30	34.21	27.34
43	2.33	34.24	50	2.40	34.25	27.36
65	2.64	34.28	75	2.55	34.30	27.39
86	2.44	34.33	100	2.30	34.35	27.45
129	2.21	34.40	150	2.40	34.45	27.52
173	2.61	34.54	200	2.80	34.60	27.60
259	3.16	34.72	300	3.35	34.77	27.69
350	3.54	34.83	400	3.60	34.85	27.73
532	3.58	34.88	(600)	3.60	34.88	27.75

Station 4747; Apr. 30; latitude 47°59.5' N., longitude 46°21' W.; depth 1,171 meters; dynamic height 970.872

0	3.46	34.19	0	3.46	34.19	27.21
25	2.81	34.26	25	2.81	34.26	27.34
50	2.67	34.32	50	2.67	34.32	27.40
76	2.71	34.41	75	2.70	34.41	27.46
100	2.75	34.48	100	2.75	34.48	27.51
151	2.80	34.60	150	2.80	34.60	27.60
201	3.23	34.73	200	3.25	34.73	27.66
301	3.55	34.81	300	3.55	34.81	27.70
330	3.55	34.82	400	3.55	34.82	27.71
507	3.52	34.82	600	3.55	34.85	27.73
692	3.60	34.88	800	3.55	34.88	27.75
896	3.46	34.88	(1,000)	3.45	34.88	27.76

Station 4748; Apr. 30; latitude 47°55.5' N., longitude 46°10' W.; depth 1,060 meters; dynamic height 970.872

0	3.31	34.06	0	3.31	34.06	27.13
26	3.05	34.12	25	3.05	34.12	27.20
51	2.97	34.15	50	3.00	34.15	27.23
77	2.50	34.40	75	2.50	34.38	27.45
102	2.74	34.52	100	2.75	34.51	27.54
152	2.90	34.63	150	2.90	34.63	27.62
203	3.28	34.73	200	3.25	34.73	27.66
305	3.67	34.84	300	3.65	34.84	27.71
415	3.68	34.85	400	3.70	34.85	27.72
614	3.54	34.85	600	3.55	34.85	27.73
821	3.46	34.87	800	3.45	34.87	27.76
1,028	3.31	34.89	1,000	3.35	34.89	27.78

Station 4749; Apr. 30; latitude 47°47' N., longitude 45°50' W.; depth 436 meters; dynamic height 970.892

0	2.83	33.87	0	2.83	33.87	27.02
21	2.08	33.90	25	2.05	33.93	27.13
43	2.00	34.09	50	2.00	34.12	27.29
64	2.15	34.17	75	2.85	34.33	27.38
86	3.67	34.47	100	3.75	34.63	27.45
128	3.79	34.62	150	3.90	34.68	27.56
170	3.96	34.73	200	3.90	34.75	27.62
256	3.50	34.76	300	3.80	34.81	27.68
341	*3.88	34.85	(400)	3.90	34.87	27.72

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4750; Apr. 30; latitude 47°43' N., longitude 45°40' W.; depth 306 meters; dynamic height 970.898						
0	2.97	33.90	0	2.97	33.90	27.03
23	1.94	33.98	25	2.00	34.02	27.21
47	4.19	34.34	50	4.30	34.37	27.28
70	5.39	34.57	75	5.25	34.57	27.33
94	4.81	34.57	100	4.70	34.57	27.39
141	4.14	34.59	150	4.05	34.60	27.48
187	3.83	34.66	200	3.85	34.69	27.57
253	3.96	34.82				

Station 4751; Apr. 30; latitude 47°29' N., longitude 45°04' W.; depth 224 meters; dynamic height 970.972

0	4.88	33.75	0	4.88	33.75	26.72
24	4.86	33.75	25	4.85	33.75	26.72
49	4.73	33.75	50	4.75	33.75	26.74
73	4.61	33.74	75	4.60	33.75	26.75
97	4.19	33.88	100	4.20	33.90	26.91
146	4.06		150	4.05	34.26	27.22
194	3.88	34.58	200	3.85	34.62	27.52

Station 4752; Apr. 30; latitude 47°22' N., longitude 45°00' W.; depth 188 meters; dynamic height 970.960

0	4.88	33.73	0	4.88	33.73	26.70
26	4.81	33.75	25	4.80	33.75	26.73
51	4.73	33.74	50	4.75	33.74	26.73
77	4.63	33.75	75	4.65	33.75	26.74
101	4.14	34.05	100	4.15	34.04	27.03
153	3.95	34.48	150	3.95	34.46	27.39

Station 4753; Apr. 30; latitude 47°23' N., longitude 45°13' W.; depth 220 meters; dynamic height 970.970

0	4.83	33.75	0	4.83	33.75	26.72
23	4.82	33.75	25	4.80	33.75	26.73
47	4.81	33.74	50	4.80	33.75	26.73
70	4.68	33.74	75	4.65	33.74	26.74
93	4.44	33.78	100	4.35	33.85	26.85
140	3.82	34.35	150	3.80	34.41	27.36
186	3.80	34.59	200	3.80	34.65	27.55

Station 4754; Apr. 30; latitude 47°22' N., longitude 45°35' W.; depth 265 meters; dynamic height 970.952

0	4.89	33.76	0	4.89	33.76	26.73
26	4.87	33.76	25	4.90	33.76	26.73
51	4.84	33.77	50	4.85	33.77	26.74
77	4.73	33.77	75	4.75	33.77	26.75
102	4.00	34.24	100	4.00	34.23	27.19
153	3.76	34.54	150	3.75	34.53	27.45
204	4.07	34.74	200	4.05	34.73	27.58

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ _t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	

Station 4755; Apr. 30; latitude 47°22' N., longitude 45°53' W.; depth 318 meters; dynamic height 970.933

0	4.68	33.74	0	4.68	33.74	26.73
25	4.64	33.75	25	4.64	33.75	26.74
49	1.96	33.81	50	1.90	33.81	27.05
74	1.70	33.84	75	1.70	33.85	27.09
98	1.80	33.99	100	1.90	34.00	27.20
147	4.23	34.60	150	4.20	34.61	27.48
197	3.81	34.70	200	3.80	34.71	27.60
295	3.99	34.84	300	4.00	34.85	27.69

Station 4756; Apr. 30; latitude 47°22' N., longitude 46°14' W.; depth 635 meters; dynamic height 970.914

0	2.05	33.79	0	2.05	33.79	27.02
25	1.84	33.80	25	1.84	33.80	27.04
50	1.60	33.97	50	1.60	33.97	27.20
75	1.42	34.08	75	1.42	34.08	27.30
100	1.48	34.16	100	1.48	34.16	27.35
150	2.11	34.36	150	2.11	34.36	27.47
200	2.41	34.48	200	2.41	34.48	27.54
300	3.28	34.74	300	3.28	34.74	27.67
376	3.90	34.84	400	3.90	34.85	27.70
570	*3.76	-----	(600)	3.75	34.87	27.73

Station 4757; May 1; latitude 47°19' N., longitude 47°06' W.; depth 558 meters; dynamic height 970.941

0	0.27	33.02	0	0.27	33.02	26.52
25	0.23	33.38	25	0.23	33.38	26.81
51	-0.16	33.60	50	-0.15	33.59	27.00
77	0.42	33.84	75	0.40	33.82	27.16
103	0.72	33.96	100	0.70	33.95	27.24
153	2.16	34.33	150	2.10	34.30	27.42
204	2.37	34.47	200	2.30	34.46	27.54
307	2.89	34.64	300	2.90	34.63	27.62
411	3.30	34.76	400	3.25	34.75	27.68

Station 4758; May 1; latitude 47°16.5' N., longitude 47°16' W.; depth 330 meters; dynamic height 970.968

0	0.15	33.05	0	0.15	33.05	26.54
22	0.01	33.06	25	0.05	33.07	26.57
45	0.32	33.33	50	0.10	33.38	26.82
67	-0.55	33.51	75	-0.40	33.56	26.99
89	-0.11	33.65	100	0.15	33.72	27.09
133	0.84	34.01	150	1.30	34.15	27.36
178	2.06	34.33	200	2.25	34.40	27.49
267	2.57	34.56	(300)	2.75	34.62	27.63

Station 4759; May 1; latitude 47°11.5' N., longitude 47°32' W.; depth 227 meters; dynamic height 971.010

0	0.54	32.84	0	0.54	32.84	26.36
25	-0.03	33.00	25	-0.03	33.00	26.52
51	-0.85	33.17	50	-0.87	33.17	26.68
76	-0.58	33.37	75	-0.56	33.37	26.83
101	0.06	33.51	100	0.06	33.51	26.93
152	0.73	33.83	150	0.70	33.82	27.14
203	1.56	34.12	200	1.59	34.10	27.30

Observed values			Scaled values			σ _t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	

Station 4760; May 1; latitude 47°05.5' N., longitude 47°49' W.; depth 174 meters; dynamic height 971.029

0	0.67	32.81	0	0.67	32.81	26.34
21	0.31	32.88	25	0.15	32.91	26.43
42	-0.48	33.04	50	-0.70	33.12	26.64
63	-0.96	33.26	75	-0.90	33.30	26.79
84	-0.77	33.33	100	-0.55	33.38	26.84
168	0.60	33.66	150	0.35	33.58	26.96

Station 4761; May 1; latitude 46°59' N., longitude 48°10' W.; depth 134 meters; dynamic height 971.041

0	1.19	32.82	0	1.19	32.82	26.31
30	0.52	32.88	25	0.60	32.87	26.38
58	0.29	32.94	50	0.35	32.92	26.43
88	-0.95	33.26	75	-0.60	33.09	26.60
116	0.06	33.51	100	-0.45	33.39	26.85

Station 4762; May 1; latitude 46°48' N., longitude 48°43' W.; depth 102 meters; dynamic height 971.047

0	1.57	32.79	0	1.57	32.79	26.26
24	1.05	32.81	25	1.05	32.81	26.32
49	0.81	32.82	50	0.75	32.82	26.33
73	-0.54	33.08	75	-0.55	33.09	26.60

Station 4763; May 1; latitude 46°48' N., longitude 48°05' W.; depth 124 meters; dynamic height 971.041

0	1.02	32.82	0	1.02	32.82	26.33
25	0.64	32.86	25	0.64	32.86	26.37
50	0.22	32.92	50	0.22	32.92	26.44
75	-0.54	33.22	75	-0.54	33.22	26.71
100	-0.08	33.45	100	-0.08	33.45	26.88

Station 4764; May 1; latitude 46°48' N., longitude 47°37' W.; depth 176 meters; dynamic height 971.041

0	0.77	32.89	0	0.77	32.89	26.38
25	0.48	32.88	25	0.48	32.88	26.40
51	-0.14	32.98	50	-0.10	32.97	26.49
76	-0.87	33.22	75	-0.85	33.21	26.72
102	-0.94	33.31	100	-0.95	33.31	26.80
153	0.36	33.61	150	0.25	33.59	26.98

Station 4765; May 1-2; latitude 46°45.5' N., longitude 47°16' W.; depth 330 meters; dynamic height 970.973

0	0.32	33.02	0	0.32	33.02	26.52
25	0.37	33.38	25	0.37	33.38	26.80
51	0.45	33.48	50	0.45	33.47	26.87
76	1.09	33.73	75	1.10	33.73	27.03
101	0.44	33.82	100	0.45	33.82	27.15
152	1.23	34.13	150	1.20	34.12	27.35
203	1.96	34.35	200	1.90	34.34	27.47
304	2.50	34.54	300	2.45	34.54	27.58

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4766; May 2; latitude 46°45.5' N., longitude 47°10' W.; depth 733 meters; dynamic height 970.927						
0	0.95	33.17	0	0.95	33.17	26.60
27	1.98	33.97	25	1.95	33.92	27.13
53	1.86	34.08	50	1.85	34.07	27.26
80	1.82	34.16	75	1.80	34.14	27.32
105	1.99	34.26	100	1.95	34.24	27.39
159	2.06	34.34	150	2.00	34.32	27.45
212	2.47	34.52	200	2.35	34.48	27.54
317	3.19	34.72	300	3.10	34.69	27.65
371	3.78	34.78	400	3.80	34.80	27.67
590	3.84	34.85	600	3.85	34.85	27.70
Station 4767; May 2; latitude 46°45.5' N., longitude 46°54' W.; depth 1,209 meters; dynamic height 970.927						
0	1.75	33.56	0	1.75	33.56	26.86
28	1.58	33.73	25	1.60	33.72	27.00
55	1.50	33.89	50	1.50	33.87	27.13
83	1.45	34.13	75	1.45	34.08	27.29
110	1.72	34.24	100	1.60	34.20	27.38
165	2.19	34.39	150	2.10	34.35	27.46
220	2.50	34.52	200	2.40	34.47	27.54
330	3.22	34.71	300	3.05	34.66	27.63
431	3.57	34.82	400	3.50	34.78	27.68
645	3.65	34.86	600	3.65	34.85	27.72
861	*3.50	34.86	800	3.55	34.86	27.74
1,078	3.37	34.87	1,000	3.40	34.87	27.77
Station 4768; May 2; latitude 46°46' N., longitude 46°27' W.; depth 527 meters; dynamic height 970.927						
0	3.46	33.65	0	3.46	33.65	26.79
25	2.94	33.70	25	2.94	33.70	26.87
51	1.28	33.62	50	1.40	33.62	26.93
75	1.87	33.94	75	1.85	33.94	27.15
101	1.64	34.16	100	1.65	34.16	27.35
151	3.36	34.54	150	3.35	34.54	27.50
202	4.01	34.74	200	4.00	34.73	27.59
303	3.79	34.80	300	3.80	34.80	27.67
372	3.85	34.84	400	3.85	34.85	27.70
514	3.76	34.86				
Station 4769; May 2; latitude 46°46' N., longitude 46° 10' W.; depth 330 meters; dynamic height 970.948						
0	6.20	33.85	0	6.20	33.85	26.64
25	5.85	33.98	25	5.85	33.98	26.79
50	5.83	34.00	50	5.83	34.00	26.80
75	5.65	34.00	75	5.65	34.00	26.83
101	5.41	34.47	100	5.40	34.47	27.23
151	4.76	34.63	150	4.80	34.63	27.42
202	3.62	34.60	200	3.65	34.60	27.52
302	3.73	34.82	300	3.75	34.82	27.69
Station 4770; May 2; latitude 46°46.5' N., longitude 45°46' W.; depth 293 meters; dynamic height 970.945						
0	5.64	33.77	0	5.64	33.77	26.65
25	5.12	33.80	25	5.12	33.80	26.74
50	5.01	33.82	50	5.01	33.82	26.77
76	5.10	34.23	75	5.10	34.22	27.07
101	4.69	34.36	100	4.70	34.36	27.22
151	3.98	34.54	150	4.00	34.54	27.44
202	3.78	34.66	200	3.80	34.66	27.56
252	3.78	34.72				
Station 4771; May 2; latitude 46°48' N., longitude 45°08' W.; depth 220 meters; dynamic height 970.956						
0	5.62	33.72	0	5.62	33.72	26.62
25	4.75	33.74	25	4.75	33.74	26.73
50	4.61	33.74	50	4.61	33.74	26.74
75	4.53	33.76	75	4.53	33.76	26.76
100	4.75	34.24	100	4.75	34.24	27.12
149	3.93	34.51	150	3.95	34.51	27.42
199	3.93	34.72	200	3.95	34.72	27.59
Station 4772; May 2; latitude 46°48' N., longitude 44°53' W.; depth 178 meters; dynamic height 970.966						
0	5.48	33.71	0	5.48	33.71	26.62
28	4.84	33.75	25	4.90	33.75	26.72
56	4.69	33.76	50	4.70	33.76	26.75
84	4.63	33.78	75	4.65	33.77	26.76
113	3.81	34.11	100	4.15	33.95	26.96
164	3.97	34.46	150	3.90	34.38	27.32
Station 4773; May 2; latitude 46°49' N., longitude 44°48' W.; depth 165 meters; dynamic height 970.962						
0	5.44	33.70	0	5.44	33.70	26.62
25	4.83	33.77	25	4.83	33.77	26.75
50	4.74	33.77	50	4.74	33.77	26.75
75	4.61	33.77	75	4.61	33.77	26.77
101	3.77	33.98	100	3.75	33.98	27.02
151	3.83	34.38	150	3.85	34.38	27.33
Station 4774; May 2; latitude 46°44.5' N., longitude 44°49' W.; depth 152 meters; dynamic height 970.967						
0	5.41	33.70	0	5.41	33.70	26.62
25	4.78	33.75	25	4.78	33.75	26.73
50	4.60	33.75	50	4.60	33.75	26.75
74	4.58	33.75	75	4.55	33.75	26.76
99	4.24	33.84	100	4.20	33.85	26.87
139	3.83	34.30	(150)	3.85	34.41	27.36

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4775; May 2; latitude 46°32' N., longitude 44°47' W.; depth 229 meters; dynamic height 970.951

0	5.10	33.73	0	5.10	33.73	26.68
25	4.74	33.76	25	4.74	33.76	26.74
50	4.67	33.77	50	4.67	33.77	26.76
75	4.21	33.88	75	4.21	33.88	26.89
100	3.64	34.09	100	3.64	34.09	27.12
149	3.96	34.51	150	3.95	34.51	27.42
199	3.93	34.64	200	3.95	34.64	27.52

Station 4776; May 2; latitude 46°25' N., longitude 44°47' W.; depth 650 meters; dynamic height 970.919

0	4.93	33.68	0	4.93	33.68	26.66
25	4.59	33.73	25	4.59	33.73	26.73
50	4.09	33.92	50	4.09	33.92	26.94
75	3.72	34.16	75	3.72	34.16	27.17
99	3.93	34.41	100	3.95	34.42	27.36
149	3.91	34.61	150	3.90	34.61	27.51
199	3.80	34.74	200	3.80	34.74	27.62
298	3.90	34.85	300	3.90	34.85	27.70
387	3.72	34.83	400	3.70	34.83	27.70
581	3.58	34.86	600	3.60	34.86	27.74

Station 4777; May 2-3; latitude 46°18' N., longitude 44°45' W.; depth 2,637 meters; dynamic height 970.915

0	4.86	33.72	0	4.86	33.72	26.70
24	4.05	33.80	25	4.05	33.81	26.85
48	3.50	33.90	50	3.50	33.91	26.99
72	3.23	34.01	75	3.25	34.03	27.10
97	3.36	34.26	100	3.40	34.28	27.29
145	3.72	34.58	150	3.70	34.60	27.52
193	3.70	34.72	200	3.70	34.73	27.62
290	3.72	34.82	300	3.75	34.83	27.69
337	3.79	34.85	400	3.75	34.87	27.73
517	3.60	34.88	600	3.60	34.88	27.75
704	3.56	34.88	800	3.50	34.88	27.76
891	3.39	34.87	1,000	3.40	34.87	27.77
1,379	3.38	34.88				

Station 4778; May 3; latitude 46°02' N., longitude 44°39' W.; depth 3,475 meters; dynamic height 970.977

0	9.74	34.47	0	9.74	34.47	26.60
26	9.71	34.47	25	9.70	34.47	26.61
51	10.71	34.98	50	10.70	34.98	26.83
78	10.01	34.99	75	10.15	34.99	26.93
103	8.08	34.77	100	8.35	34.78	27.06
155	6.01	34.64	150	6.15	34.65	27.28
206	3.82	34.54	200	4.00	34.55	27.45
309	4.07	34.81	300	4.05	34.80	27.64
420	3.76	34.85	400	3.80	34.85	27.71
627	3.60	34.86	600	3.65	34.86	27.73
832	3.59	34.87	800	3.60	34.87	27.75
1,046	3.38	34.86	1,000	3.40	34.86	27.76
1,586	3.36	34.88				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4779; May 3; latitude 46°03' N., longitude 45°26' W.; depth 2,468 meters; dynamic height 971.009

0	8.20	34.14	0	8.20	34.14	26.59
26	10.56	34.78	25	10.55	34.77	26.70
52	11.45	35.10	50	11.45	35.09	26.78
78	10.85	35.11	75	10.95	35.11	26.89
104	9.24	34.92	100	9.55	34.96	27.02
155	6.21	34.61	150	6.30	34.63	27.24
206	6.02	34.88	200	6.60	34.87	27.39
310	5.62	34.80	300	5.10	34.81	27.54
396	4.36	34.84	400	4.35	34.85	27.65
595	4.12	34.91	600	4.10	34.91	27.73
794	3.64	34.88	800	3.65	34.88	27.74
998	3.53	34.89	1,000	3.55	34.89	27.76
1,518	3.36	34.89				

Station 4780; May 3; latitude 46°04.5' N., longitude 46°10' W.; depth 1,691 meters; dynamic height 970.947

0	4.77	33.71	0	4.77	33.71	26.70
24	5.00	33.82	25	5.00	33.82	26.77
49	5.29	33.88	50	5.25	33.87	26.78
73	2.20	33.68	75	2.15	33.68	26.93
98	1.80	34.12	100	1.85	34.15	27.32
146	3.02	34.42	150	3.10	34.44	27.45
195	3.65	34.55	200	3.70	34.56	27.49
293	3.65	34.88	300	4.65	34.89	27.65
395	*4.67	34.96	400	4.65	34.96	27.71
597	3.88	34.92	600	4.00	34.92	27.75
802	3.68	34.90	800	3.70	34.90	27.76
1,005	3.72	34.92	1,000	3.70	34.92	27.78
1,517	3.39	34.88				

Station 4781; May 3; latitude 46°07' N., longitude 46°46' W.; depth 1,150 meters; dynamic height 970.942

0	5.03	33.74	0	5.03	33.74	26.69
25	4.98	33.80	25	4.98	33.80	26.75
50	2.71	33.70	50	2.71	33.70	26.89
75	3.66	34.08	75	3.66	34.08	27.11
100	5.18	34.52	100	5.18	34.52	27.30
150	3.07	34.45	150	3.07	34.45	27.46
200	3.94	34.68	200	3.94	34.68	27.55
300	4.27	34.85	300	4.27	34.85	27.66
381	*4.23	34.885	400	4.20	34.89	27.70
578	3.73	34.88	600	3.75	34.88	27.73
779	3.69	34.89	800	3.70	34.89	27.75
985	3.47	-----	(1,000)	3.50	34.89	27.77

Station 4782; May 3; latitude 46°09' N., longitude 47°20' W.; depth 732 meters; dynamic height 970.941

0	2.02	33.46	0	2.02	33.46	26.77
25	1.31	33.62	25	1.31	33.62	26.94
50	0.94	33.70	50	0.94	33.70	27.02
75	1.18	34.00	75	1.18	34.00	27.25
101	1.33	34.08	100	1.30	34.08	27.30
151	1.76	34.26	150	1.75	34.26	27.42
201	2.08	34.37	200	2.05	34.37	27.49
302	2.93	34.64	300	2.90	34.63	27.62
401	3.55	34.81	400	3.55	34.81	27.70
597	3.70	34.85	600	3.70	34.85	27.72

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ _t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4783; May 3; latitude 46°10.5' N., longitude 47°30' W.; depth 439 meters; dynamic height 970.958						
0	1.85	33.36	0	1.85	33.36	26.69
25	0.66	33.56	25	0.66	33.56	26.93
50	0.78	33.64	50	0.78	33.64	26.98
74	0.84	33.72	75	0.85	33.72	27.05
99	0.90	33.92	100	0.90	33.93	27.21
149	1.81	34.21	150	1.85	34.21	27.37
198	2.06	34.40	200	2.05	34.41	27.52
297	2.74	34.58	300	2.75	34.58	27.59
396	*3.18	34.70	400	3.15	34.71	27.66
Station 4784; May 3; latitude 46°10.5' N., longitude 47°49' W.; depth 174 meters; dynamic height 971.014						
0	1.29	32.86	0	1.29	32.86	26.33
25	1.16	33.05	25	1.16	33.05	26.50
50	-1.07	33.24	50	-1.07	33.24	26.75
75	-1.18	33.36	75	-1.18	33.36	26.85
101	-0.39	33.55	100	-0.45	33.54	26.97
151	0.85	33.85	150	0.85	33.85	27.15
Station 4785; May 3; latitude 46°12' N., longitude 48°03' W.; depth 119 meters; dynamic height 971.027						
0	1.91	32.90	0	1.91	32.90	26.32
26	0.54	33.02	25	0.55	33.02	26.50
52	0.03	33.08	50	0.05	33.08	26.58
79	-0.68	33.23	75	-0.60	33.21	26.71
105	-0.28	33.49	100	-0.40	33.43	26.88
Station 4786; May 4; latitude 46°14.5' N., longitude 48°33' W.; depth 92 meters; dynamic height 971.051						
0	2.42	32.70	0	2.42	32.70	26.12
25	1.68	32.77	25	1.68	32.77	26.23
51	0.84	32.78	50	0.90	32.78	26.29
76	-0.23	33.05	75	-0.20	33.04	26.56
Station 4787; May 4; latitude 46°17' N., longitude 49°00' W.; depth 70 meters; dynamic height 971.063						
0	2.61	32.60	0	2.61	32.60	26.03
21	1.78	32.63	25	1.80	32.63	26.11
42	1.35	32.63	50	1.20	32.63	26.16
Station 4788; May 4; latitude 46°07.5' N., longitude 48°41' W.; depth 75 meters; dynamic height 971.055						
0	2.38	32.66	0	2.38	32.66	26.09
23	1.51	32.70	25	1.50	32.70	26.18
45	1.27	32.72	50	1.05	32.75	26.26
68	-0.02	32.99	(75)	-0.25	33.10	26.60
Station 4789; May 4; latitude 46°01' N., longitude 48°32' W.; depth 88 meters; dynamic height 971.047						
0	1.91	32.78	0	1.91	32.78	26.23
24	1.44	32.79	25	1.40	32.79	26.27
47	1.00	32.83	50	0.85	32.87	26.37
71	-0.28	33.10	(75)	-0.50	33.16	26.66
Station 4790; May 4; latitude 45°49.5' N., longitude 48°15' W.; depth 115 meters; dynamic height 971.025						
0	1.68	32.91	0	1.68	32.91	26.34
25	0.25	32.96	25	0.25	32.96	26.47
50	-0.68	33.27	50	-0.68	33.27	26.76
75	-0.82	33.33	75	-0.82	33.33	26.81
100	-0.87	33.54	100	-0.87	33.54	26.98
Station 4791; May 4; latitude 45°47' N., longitude 48°11' W.; depth 179 meters; dynamic height 971.024						
0	1.13	32.92	0	1.13	32.92	26.39
25	-0.26	33.15	25	-0.26	33.15	26.64
51	-1.11	33.26	50	-1.10	33.26	26.76
76	-0.95	33.37	75	-0.95	33.37	26.85
102	-0.52	33.50	100	-0.55	33.49	26.93
153	0.04	33.57	150	0.00	33.56	26.97
Station 4792; May 4; latitude 45°42' N., longitude 48°06' W.; depth 658 meters; dynamic height 970.972						
0	1.02	32.90	0	1.02	32.90	26.38
24	-0.19	33.24	25	-0.20	33.24	26.72
48	-0.13	33.52	50	-0.10	33.54	26.95
72	0.55	33.72	75	0.55	33.73	27.07
96	0.63	33.78	100	0.65	33.80	27.12
144	1.17	34.06	150	1.20	34.09	27.32
191	1.83	34.28	200	1.90	34.31	27.45
287	2.62	34.54	300	2.70	34.56	27.58
378	3.04	34.69	400	3.15	34.71	27.66
570	*3.44	34.82	(600)	3.45	34.83	27.72
Station 4793; May 4; latitude 45°34.5' N., longitude 47°52' W.; depth 1,439 meters; dynamic height 970.922						
0	3.10	33.44	0	3.10	33.44	26.65
24	2.40	33.59	25	2.40	33.60	26.84
48	2.13	33.86	50	2.10	33.88	27.08
72	2.02	34.14	75	2.05	34.17	27.33
96	4.73	34.62	100	4.75	34.63	27.43
144	4.79	34.74	150	4.80	34.75	27.52
192	4.82	34.84	200	4.75	34.84	27.60
288	3.20	34.70	300	3.20	34.70	27.65
402	3.65	34.82	400	3.65	34.82	27.70
599	3.64	34.86	600	3.65	34.86	27.73
793	3.59	34.86	800	3.60	34.86	27.74
992	3.46	34.86	1,000	3.45	34.86	27.75
1,341	3.41	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t	Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4794; May 4; latitude 45°20' N., longitude 47°23' W.; depth 2,509 meters; dynamic height 970.961							Station 4797; May 5; latitude 45°30' N., longitude 45°25' W.; depth 3,658 meters; dynamic height 971.082						
0	4.97	33.31	0	4.97	33.31	26.36	0	9.75	34.04	0	9.75	34.04	26.26
25	3.37	33.44	25	3.37	33.44	26.63	25	10.24	34.64	25	10.24	34.64	26.65
50	3.68	33.72	50	3.68	33.72	26.82	50	11.57	35.11	50	11.57	35.11	26.77
76	4.56	34.20	75	4.55	34.19	27.10	75	12.31	35.38	75	12.31	35.38	26.84
101	5.11	34.47	100	5.10	34.47	27.27	100	11.73	35.26	100	11.73	35.26	26.86
151	5.34	34.70	150	5.35	34.70	27.42	150	10.73	35.17	150	10.73	35.17	26.98
201	4.85	34.74	200	4.85	34.74	27.51	200	6.54	34.57	200	6.54	34.57	27.16
302	4.51	34.86	300	4.50	34.86	27.64	300	6.36	34.87	300	6.36	34.87	27.43
388	4.30	34.90	400	4.30	34.90	27.69	411	5.89	34.98	400	5.90	34.98	27.57
584	4.32	34.95	600	4.30	34.95	27.73	618	4.75	34.97	600	4.80	34.97	27.70
782	*3.91	34.925	800	3.90	34.92	27.76	825	*4.14	34.96	800	4.20	34.96	27.76
979	3.85	34.93	1,000	3.85	34.93	27.76	1,032	3.88	34.92	1,000	3.90	34.93	27.76
1,474	3.44						1,550	*3.28	34.91				
Station 4795; May 4; latitude 45°24' N., longitude 46°40' W.; depth 3,011 meters; dynamic height 971.025							Station 4798; May 5; latitude 44°45.5' N., longitude 45°23' W.; depth 3,896 meters; dynamic height 971.204						
0	9.18	34.06	0	9.18	34.06	26.37	0	14.84	35.77	0	14.84	35.77	26.62
25	8.79	34.11	25	8.79	34.11	26.48	26	14.46	35.76	25	14.45	35.76	26.70
50	8.10	34.08	50	8.10	34.08	26.55	53	14.12	35.68	50	14.20	35.70	26.70
75	9.97	34.82	75	9.97	34.82	26.84	79	13.31	35.49	75	13.40	35.52	26.73
101	8.15	34.70	100	8.30	34.70	27.01	105	13.40	35.52	100	13.40	35.52	26.73
150	6.90	34.68	150	6.90	34.68	27.20	157	13.52	35.61	150	13.50	35.60	26.77
200	5.60	34.73	200	5.60	34.73	27.41	209	12.64	35.49	200	12.90	35.51	26.83
301	5.25	34.84	300	5.25	34.84	27.54	314	10.01	35.20	300	9.90	35.24	27.17
395	*5.14	34.94	400	5.15	34.94	27.63	309	*9.08	35.21	400	7.00	34.97	27.42
602	4.53	34.99	600	4.55	34.99	27.74	474	5.82	34.81	600	5.45	34.94	27.59
809	4.19	34.96	800	4.20	34.96	27.76	646	5.35	34.98	800	4.60	34.96	27.71
1,015	3.79	34.92	1,000	3.80	34.92	27.77	825	4.50	34.96	1,000	4.10	34.95	27.76
1,538	3.50	34.94					1,306	3.86	34.94				
Station 4796; May 5; latitude 45°27' N., longitude 46°00' W.; depth 3,402 meters; dynamic height 971.025							Station 4799; May 5; latitude 44°18.5' N., longitude 45°15' W.; depth 4,115 meters; dynamic height 971.270						
0	8.11	34.07	0	8.11	34.07	26.55	0	14.36	35.46	0	14.36	35.46	26.49
25	8.48	34.20	25	8.48	34.20	26.60	25	15.22	35.93	25	15.22	35.93	26.66
49	8.24	34.24	50	8.25	34.24	26.66	51	14.88	35.86	50	14.90	35.86	26.67
74	10.13	34.95	75	10.10	34.95	26.92	76	15.07	35.95	75	15.05	35.95	26.71
98	7.91	34.67	100	7.85	34.67	27.06	102	15.11	35.98	100	15.15	35.98	26.71
147	7.07	34.72	150	7.00	34.72	27.22	151	13.88	35.70	150	13.90	35.71	26.77
196	5.81	34.68	200	5.70	34.68	27.35	202	12.88	35.49	200	12.90	35.50	26.82
294	4.75	34.74	300	4.80	34.76	27.53	304	11.22	35.32	300	11.35	35.32	26.98
336	*5.22	34.85	400	5.05	34.95	27.65	426	8.19	35.02	400	8.85	35.07	27.22
535	4.68	34.99	600	4.60	34.98	27.72	639	5.19	34.92	600	5.45	34.93	27.58
734	4.34	34.94	800	4.20	34.93	27.73	854	4.69	34.96	800	4.80	34.95	27.68
929	3.94	34.92	1,000	3.80	34.92	27.77	1,069	4.32	34.96	1,000	4.40	34.96	27.73
1,434	3.53						1,608	3.58	34.96				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4800; May 5; latitude 44°26.5' N., longitude 45°54' W.; depth 3,658 meters; dynamic height 971.133

0	11.79	34.40	0	11.79	34.40	26.18
19	11.35	34.60	25	11.75	34.72	26.44
38	13.95	35.56	50	14.00	35.58	26.65
58	14.02	35.58	75	11.75	35.13	26.76
76	11.71	35.12	100	11.70	35.25	26.86
115	11.71	35.34	150	11.50	35.29	26.93
154	11.44	35.25	200	8.85	34.83	27.03
230	5.69	34.46	300	5.90	34.65	27.31
260	7.66	34.67	400	5.10	34.78	27.51
388	5.21	34.77	600	4.40	34.90	27.68
515	4.57	34.86	800	4.15	34.92	27.73
658	4.29	34.92	1,000	3.90	34.91	27.75
1,038	3.86	34.91				

Station 4801; May 5; latitude 44°36.5' N., longitude 46°40' W.; depth 3,749 meters; dynamic height 970.996

0	8.34	33.68	0	8.34	33.68	26.20
28	6.92	33.74	25	7.00	33.73	26.44
55	6.59	33.92	50	6.65	33.90	26.62
84	3.48	33.98	75	4.20	33.96	26.96
111	5.21	34.38	100	4.50	34.17	27.10
167	5.21	34.68	150	5.25	34.63	27.37
223	4.86	34.74	200	4.95	34.72	27.48
334	4.56	34.86	300	4.65	34.83	27.60
404	4.35	34.88	400	4.35	34.88	27.67
632	4.19	34.94	600	4.20	34.94	27.74
877	3.94	34.93	800	4.05	34.93	27.74
1,098	3.62	34.905	1,000	3.75	34.92	27.77
1,654	3.44	34.90				

Station 4802; May 6; latitude 44°44' N., longitude 47°18' W.; depth 3,658 meters; dynamic height 970.972

0	5.91	33.43	0	5.91	33.43	26.34
24	5.32	33.60	25	5.30	33.60	26.55
49	5.32	33.63	50	5.30	33.63	26.57
72	4.71	33.78	75	4.55	33.81	26.80
97	3.12	34.02	100	3.00	34.03	27.13
145	2.21	34.26	150	2.30	34.29	27.40
193	4.22	34.73	200	4.20	34.74	27.58
290	3.88	34.78	300	3.90	34.79	27.65
376	4.14	34.90	400	4.10	34.90	27.72
560	3.85	34.87	600	3.85	34.88	27.72
742	3.73	34.90	800	3.70	34.90	27.76
932	3.60	34.885	1,000	3.60	34.89	27.76
1,422	3.44	34.88				

Station 4803; May 6; latitude 44°52.5' N., longitude 48°04' W.; depth 2,834 meters; dynamic height 970.920

0	2.64	33.27	0	2.64	33.27	26.56
24	0.69	33.43	25	0.70	33.44	26.83
49	1.23	33.74	50	1.25	33.75	27.04
73	1.82	34.05	75	1.90	34.03	27.22
98	3.58	34.43	100	3.70	34.45	27.40
146	4.61	34.65	150	4.60	34.66	27.47
195	4.16	34.72	200	4.15	34.73	27.57
293	4.11	34.83	300	4.10	34.84	27.67
389	4.13	34.90	400	4.10	34.90	27.72
584	3.83	34.90	600	3.80	34.90	27.75
778	3.60	34.89	800	3.60	34.89	27.76
991	3.50	34.89	1,000	3.50	34.89	27.77
1,560	3.44	34.90				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4804; May 6; latitude 44°56' N., longitude 48°32' W.; depth 1,518 meters; dynamic height 970.904

0	2.91	33.38	0	2.91	33.38	26.62
24	2.46	33.44	25	2.45	33.45	26.72
49	1.57	33.99	50	1.55	34.01	27.23
73	1.79	34.22	75	1.80	34.23	27.39
97	2.00	34.32	100	2.05	34.32	27.45
146	2.43	34.44	150	2.50	34.45	27.51
195	3.13	34.64	200	3.15	34.65	27.61
292	3.25	34.74	300	3.30	34.75	27.68
338	3.55	34.83	400	3.60	34.85	27.73
513	3.62	34.86	600	3.65	34.88	27.74
690	3.66	34.90	800	3.65	34.90	27.76
880	3.58	34.90	1,000	3.55	34.90	27.77
1,385	3.44	34.90				

Station 4805; May 6; latitude 44°57' N., longitude 48°45' W.; depth 1,371 meters; dynamic height 970.975

0	1.93	33.19	0	1.93	33.19	26.55
27	1.76	33.48	25	1.75	33.47	26.79
52	0.83	33.63	50	0.85	33.62	26.97
79	0.89	33.71	75	0.90	33.70	27.03
104	0.78	33.79	100	0.80	33.78	27.09
157	1.17	34.05	150	1.10	34.01	27.27
210	2.05	34.34	200	1.90	34.30	27.44
314	2.82	34.58	300	2.75	34.56	27.58
442	3.46	34.80	400	3.30	34.74	27.67
658	3.62	34.86	600	3.60	34.84	27.74
871	3.47	34.85	800	3.55	34.86	27.74
1,092	3.45		1,000	3.45	34.86	27.75

Station 4806; May 6; latitude 44°58.5' N., longitude 48°59' W.; depth 604 meters; dynamic height 971.072

0	1.78	32.90	0	1.78	32.90	26.32
24	1.21	32.92	25	1.20	32.92	26.38
48	-0.26	33.13	50	-0.30	33.15	26.64
72	-0.74	33.26	75	-0.75	33.27	26.76
96	-0.62	33.36	100	-0.60	33.38	26.84
144	-0.01	33.57	150	0.10	33.60	26.99
193	0.77	33.86	200	0.90	33.90	27.19
289	2.00	34.31	300	2.15	34.35	27.46
391	2.95	34.61	400	3.00	34.63	27.61
583	3.45	34.78	600	3.50	34.79	27.69

Station 4807; May 6; latitude 44°59.5' N., longitude 49°08' W.; depth 77 meters; dynamic height 971.073

0	2.62	32.78	0	2.62	32.78	26.17
23	0.79	32.89	25	0.75	32.91	26.40
47	-0.16	33.16	50	-0.15	33.21	26.70
70	-0.09		75	-0.05	33.56	26.97

Station 4808; May 6; latitude 44°59' N., longitude 49°24' W.; depth 70 meters; dynamic height 971.087

0	2.50	32.80	0	2.50	32.80	26.20
25	2.32	32.80	25	2.32	32.80	26.22
50	0.56	32.93	50	0.56	32.93	26.43

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4809; May 6; latitude 44°16' N., longitude 49°29' W.; depth 53 meters; dynamic height 971.083

0	3.09	32.83	0	3.09	32.83	26.17
25	0.96	32.94	25	1.00	32.94	26.42
46	0.64	32.97	(50)	0.60	32.98	26.47

Station 4810; May 7; latitude 44°14' N., longitude 49°23' W.; depth 93 meters; dynamic height 971.079

0	2.47	32.89	0	2.47	32.89	26.26
25	0.59	32.97	25	0.59	32.97	26.46
51	0.21	33.04	50	0.20	33.04	26.54
76	-0.31	33.24	75	-0.30	33.23	26.71

Station 4811; May 7; latitude 44°13.5' N., longitude 49°19' W.; depth 201 meters; dynamic height 971.082

0	2.46	32.87	0	2.46	32.87	26.25
25	1.01	32.97	25	1.01	32.97	26.44
49	0.35	33.03	50	0.35	33.03	26.52
74	-0.33	33.22	75	-0.35	33.22	26.70
98	-0.76	33.33	100	-0.75	33.33	26.81
147	0.13	33.66	150	0.15	33.66	27.04

Station 4812; May 7; latitude 44°12' N., longitude 49°15' W.; depth 713 meters; dynamic height 971.064

0	2.31	32.88	0	2.31	32.88	26.28
25	0.19	33.04	25	0.19	33.04	26.54
51	-0.85	33.23	50	-0.85	33.23	26.73
76	-0.43	33.47	75	-0.45	33.46	26.91
101	-0.15	33.56	100	-0.15	33.55	26.97
152	0.72	33.78	150	0.70	33.78	27.10
203	0.87	33.82	200	0.85	33.82	27.13
304	1.99	34.24	300	1.95	34.22	27.38
399	2.79	34.57	400	2.80	34.57	27.58
593	3.49	34.81	600	3.50	34.81	27.71

Station 4813; May 7; latitude 44°10' N., longitude 49°07' W.; depth 1,582 meters; dynamic height 971.043

0	2.36	32.89	0	2.36	32.89	26.27
25	0.17	33.07	25	0.17	33.07	26.56
50	-0.86	33.28	50	-0.86	33.28	26.77
75	-0.32	33.49	75	-0.32	33.49	26.92
99	0.32	33.68	100	0.35	33.68	27.04
149	0.74	33.78	150	0.75	33.78	27.10
199	1.11	33.95	200	1.10	33.95	27.22
298	2.10	34.33	300	2.15	34.34	27.45
404	2.90	34.62	400	2.85	34.61	27.61
600	3.70	34.84	600	3.70	34.84	27.71
792	3.67	34.87	800	3.70	34.87	27.74
990	3.61	34.88	1,000	3.60	34.88	27.75
1,484	3.51	34.88				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4814; May 7; latitude 44°07' N., longitude 48°52' W.; depth 2,615 meters; dynamic height 971.016

0	2.20	32.87	0	2.20	32.87	26.27
24	0.00	33.06	25	-0.05	33.06	26.56
48	-0.79	33.28	50	-0.80	33.29	26.77
72	-0.26	33.50	75	-0.20	33.52	26.95
96	0.23	33.64	100	0.30	33.66	27.03
144	0.80	33.84	150	0.80	33.87	27.17
193	1.60	34.18	200	1.70	34.23	27.39
289	4.21	34.67	300	4.40	34.71	27.53
368	4.70	34.90	400	4.70	34.93	27.67
554	4.49	34.95	600	4.40	34.95	27.72
741	4.10	34.94	800	4.05	34.93	27.74
934	3.87	34.92	1,000	3.80	34.92	27.77
1,429	3.44	34.90				

Station 4815; May 7; latitude 43°58' N., longitude 48°21' W.; depth 3,475 meters; dynamic height 970.961

0	4.36	33.06	0	4.36	33.06	26.22
25	2.63	33.24	25	2.63	33.24	26.54
51	0.33	33.55	50	0.35	33.54	26.93
76	3.21	34.08	75	3.20	34.07	27.15
102	1.44	34.04	100	1.45	34.04	27.26
152	2.51	34.36	150	2.45	34.35	27.43
204	2.96	34.52	200	2.90	34.50	27.52
306	4.93	34.935	300	4.90	34.92	27.65
412	4.06	34.95	400	4.70	34.95	27.69
615	4.10	34.92	600	4.15	34.92	27.73
816	3.92	34.92	800	3.95	34.92	27.75
1,022	3.56	34.89	1,000	3.60	34.89	27.76
1,544	3.47	34.91				

Station 4816; May 7; latitude 43°48' N., longitude 47°43' W.; depth 3,841 meters; dynamic height 971.087

0	9.54	33.83	0	9.54	33.83	26.13
22	10.84	34.86	25	10.85	34.89	26.73
43	10.98	34.99	50	11.10	35.03	26.80
65	11.40	35.14	75	11.45	35.16	26.84
87	11.49	35.18	100	11.50	35.18	26.84
130	11.46	35.17	150	9.90	34.95	26.95
173	7.99	34.78	200	7.20	34.78	27.23
260	6.38	34.79	300	6.10	34.80	27.40
296	6.14	34.80	400	5.15	34.84	27.55
451	4.75	34.86	600	4.30	34.90	27.69
610	4.25	34.90	800	4.10	34.93	27.74
777	4.15	34.93	1,000	3.85	34.91	27.75
1,219	3.59	34.89				

Station 4817; May 7 latitude 43°36.5' N., longitude 46°59' W.; depth 4,490 meters; dynamic height 971.073

0	8.45	33.78	0	8.45	33.78	26.27
25	8.46	33.95	25	8.46	33.95	26.40
50	7.58	34.08	50	7.58	34.08	26.63
75	7.35	34.33	75	7.35	34.33	26.86
99	6.37	34.35	100	6.35	34.35	27.01
150		34.36	150	5.25	34.36	27.16
200	6.95	34.76	200	6.95	34.76	27.26
299	4.95	34.69	300	4.95	34.70	27.46
302	4.91	34.70	400	4.95	34.83	27.56
499	5.00	34.94	600	4.65	34.94	27.69
698	4.30	34.94	800	4.05	34.91	27.73
903	3.85	34.89	1,000	3.80	34.89	27.74
1,433	3.58	34.89				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4818; May 8; latitude 43°28' N., longitude 46°14' W.; depth 4,572 meters; dynamic height 971.040

0	8.78	33.52	0	8.78	33.52	26.01
24	7.98	33.65	25	7.90	33.65	26.25
48	6.74	33.75	50	6.65	33.75	26.50
71	5.43	33.69	75	4.95	33.69	26.67
95	2.17	33.72	100	2.20	33.74	26.96
142	2.36	34.04	150	2.45	34.11	27.24
190	3.34	34.43	200	3.55	34.48	27.43
285	4.68	34.79	300	4.85	34.84	27.58
316	4.95	34.88	400	4.85	34.93	27.65
486	4.70	34.94	600	4.55	34.94	27.70
663	4.42	34.94	800	4.10	34.93	27.74
849	4.00	34.93	1,000	3.75	34.92	27.77
1,349	3.53	34.90				

Station 4819; May 8; latitude 43°20.5' N., longitude 45°33' W.; depth 4,572 meters; dynamic height 971.174

0	15.37	35.52	0	15.37	35.52	26.30
28	15.34	35.51	25	15.35	35.52	26.30
56	15.19	35.57	50	15.25	35.55	26.36
84	14.26	35.67	75	14.60	35.65	26.58
111	13.29	35.50	100	13.70	35.58	26.72
334	4.83	34.51	150	11.65	35.28	26.89
400	5.09	34.70	200	9.35	34.99	27.07
584	5.14	34.96	300	5.60	34.58	27.29
756	4.35	34.93	400	5.10	34.70	27.45
954	4.07	34.93	600	5.10	34.96	27.65
1,467	3.70	34.93	800	4.30	34.93	27.71
			1,000	4.05	34.93	27.74

Station 4820; May 8; latitude 42°52.5' N., longitude 45°53' W.; depth 4,663 meters; dynamic height 971.577

0	19.10	36.31	0	19.10	36.31	26.01
28	18.16	36.02	25	18.20	36.04	26.03
52	17.12	36.28	50	17.15	36.27	26.47
78	16.87	36.32	75	16.90	36.32	26.57
104	16.75	36.29	100	16.75	36.30	26.59
156	16.58	36.26	150	16.60	36.26	26.59
208	16.56	36.26	200	16.55	36.26	26.60
311	*16.21	---	300	16.30	36.18	26.60
415	*14.67	35.86	400	14.95	35.90	26.69
625	9.35	35.20	600	9.95	35.27	27.19
836	5.59	34.90	800	6.00	34.92	27.51
1,046	4.65	34.94	1,000	4.80	34.94	27.67
1,572	3.54	34.93				

Station 4821; May 8; latitude 42°28' N., longitude 46°09' W.; depth 4,572 meters; dynamic height 971.512

0	18.49	36.10	0	18.49	36.10	26.01
26	18.43	36.15	25	18.45	36.15	26.05
52	---	36.32	50	17.35	36.30	26.44
78	17.90	36.44	75	17.85	36.43	26.42
103	17.61	36.40	100	17.65	36.40	26.45
156	16.75	36.22	150	16.85	36.24	26.51
207	15.92	36.11	200	16.00	36.12	26.62
310	14.40	35.85	300	14.55	35.88	26.76
421	12.65	35.62	400	13.00	35.66	26.92
630	8.39	35.08	600	9.00	35.16	27.26
			(800)	5.75	34.92	27.54
			(1,000)	4.80	34.97	27.70

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4822; May 8; latitude 42°47.5' N., longitude 46°40' W.; depth 4,207 meters; dynamic height 971.355

0	18.64	36.09	0	18.64	36.09	25.97
26	18.41	36.34	25	18.40	36.34	26.21
52	17.42	36.29	50	17.50	36.29	26.40
78	17.11	36.28	75	17.15	36.28	26.48
104	16.52	36.17	100	16.65	36.19	26.53
157	15.14	35.95	150	15.40	35.98	26.66
208	12.84	35.49	200	13.10	35.56	26.82
312	12.55	35.56	300	12.85	35.59	26.90
278	*13.35	35.64	400	10.60	35.28	27.19
456	8.58	35.11	600	6.30	34.95	27.49
660	5.74	34.93	800	5.20	34.98	27.65
844	5.06	34.995	1,000	4.70	34.98	27.71
1,336	3.91	34.94				

Station 4823; May 9; latitude 42°58.5' N., longitude 47°21' W.; depth 3,731 meters; dynamic height 971.229

0	15.26	35.40	0	15.26	35.40	26.24
26	15.28	35.40	25	15.25	35.40	26.24
51	16.15	35.96	50	16.15	35.96	26.47
77	14.45	35.71	75	14.55	35.73	26.64
103	13.81	35.65	100	13.90	35.65	26.72
153	13.40	35.65	150	13.40	35.65	26.83
205	13.16	35.67	200	13.20	35.67	26.89
308	10.04	35.29	300	10.25	35.31	27.17
365	8.85	35.13	400	8.10	35.06	27.33
549	5.36	34.89	600	5.05	34.97	27.61
737	4.56	34.95	800	4.40	34.95	27.72
937	4.14	34.94	1,000	4.10	34.94	27.75
1,462	3.74	34.92				

Station 4824; May 9; latitude 43°09.5' N., longitude 48°05' W.; depth 3,292 meters; dynamic height 971.024

0	8.54	33.33	0	8.54	33.33	25.90
27	11.91	35.16	25	11.75	35.02	26.68
53	12.66	35.46	50	12.60	35.45	26.84
80	11.34	35.20	75	11.75	35.26	26.86
105	9.55	35.00	100	10.00	35.04	27.00
159	5.06	34.40	150	5.50	34.49	27.23
212	6.75	34.87	200	6.35	34.77	27.35
317	4.52	34.77	300	4.75	34.78	27.55
404	3.93	34.78	400	3.95	34.78	27.63
606	3.92	34.87	600	3.90	34.87	27.72
811	4.00	34.93	800	4.60	34.93	27.75
1,017	3.76	34.90	1,000	3.80	34.90	27.75
1,540	3.41	34.91				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰		Depth, meters	Temperature, °C	Salinity, ‰	σ _t	Depth, meters	Temperature, °C	Salinity, ‰		Depth, meters	Temperature, °C	Salinity, ‰	σ _t
Station 4825; May 9; latitude 43°20' N., longitude 48°50' W.; depth 1,920 meters; dynamic height 970.956								Station 4828; May 10; latitude 41°59.5' N., longitude 48°02' W.; depth 3,658 meters; dynamic height 971.026							
0	5.12	33.16		0	5.12	33.16	26.23	0	8.38	32.96		0	8.38	32.96	25.63
24	4.11	33.32		25	4.10	33.34	26.48	25	5.09	33.22		25	5.09	33.22	26.28
50	1.80	33.70		50	1.80	33.71	26.98	50	3.76	33.60		50	3.76	33.60	26.72
74	2.02	34.07		75	2.00	34.08	27.25	75	4.50	33.98		75	4.50	33.98	26.94
99	2.70	34.24		100	2.70	34.25	27.33	101	4.02	34.13		100	4.05	34.13	27.11
148	4.15	34.60		150	4.20	34.61	27.48	150	4.92	34.44		150	4.90	34.44	27.26
198	4.33	34.73		200	4.30	34.73	27.56	200	3.87	34.43		200	3.85	34.43	27.37
297	3.11	34.67		300	3.15	34.67	27.63	301	5.40	34.88		300	5.40	34.88	27.55
393	3.40	34.76		400	3.40	34.77	27.69	392	4.88	34.90		400	4.85	34.91	27.64
588	3.68	34.84		600	3.65	34.84	27.71	589	4.73	35.00		600	4.70	35.00	27.73
781	3.61	34.86		800	3.60	34.86	27.74	788	4.18	34.95		800	4.10	34.95	27.76
979	3.54	34.86		1,000	3.55	34.86	27.74	986	3.80	34.925		1,000	3.80	34.92	27.77
1,483	3.45	34.88						1,480	3.66	34.94					
Station 4826; May 9; latitude 42°37.5' N., longitude 49°01' W.; depth 2,286 meters; dynamic height 970.985								Station 4829; May 10; latitude 41°34.5' N., longitude 47°14' W.; depth 4,207 meters; dynamic height 971.176							
0	4.53	33.08		0	4.53	33.08	26.22	0	13.86	34.63		0	13.86	34.63	25.95
24	5.11	33.59		25	5.10	33.60	26.58	25	14.49	35.57		25	14.49	35.57	26.54
49	2.84	33.66		50	2.70	33.67	26.87	50	14.14	35.61		50	14.14	35.61	26.65
73	0.79	33.81		75	0.80	33.82	27.13	75	14.63	35.84		75	14.63	35.84	26.71
98	1.30	33.94		100	1.30	33.95	27.20	99	13.76	35.68		100	13.75	35.68	26.78
145	1.84	34.18		150	1.90	34.20	27.36	149	13.34	35.63		150	13.30	35.68	26.87
194	2.42	34.41		200	2.50	34.43	27.49	199	10.29	35.10		200	10.25	35.10	27.00
292	3.25	34.64		300	3.30	34.65	27.60	298	8.40	34.95		300	8.65	35.02	27.21
353	3.61	34.73		400	3.60	34.76	27.66	284	9.18	35.08		400	7.40	35.07	27.44
529	3.55	34.80		600	3.65	34.82	27.70	443	6.86	35.08		600	5.10	34.96	27.65
703	3.79	34.86		800	3.75	34.87	27.73	612	4.96	34.96		800	4.35	34.95	27.73
889	3.71	34.87		1,000	3.65	34.87	27.74	787	4.37	34.95		1,000	4.15	34.95	27.75
1,370	3.51	34.87						1,265	3.86	34.94					
Station 4827; May 9; latitude 42°21.5' N., longitude 48°33' W.; depth 3,109 meters; dynamic height 971.014								Station 4830; May 10; latitude 40°59' N., longitude 48°28' W.; depth 3,011 meters; dynamic height 971.155							
0	9.21	33.17		0	9.21	33.17	25.68	0	12.95	34.69		0	12.95	34.69	26.18
27	8.48	34.46		25	8.50	34.37	26.73	27	12.10	34.78		25	12.15	34.78	26.41
53	8.28	34.70		50	8.30	34.68	26.99	54	11.62	34.81		50	11.65	34.81	26.53
81	8.98	34.96		75	8.90	34.90	27.04	81	12.87	35.45		75	12.80	35.32	26.70
107	8.17	34.86		100	8.45	34.88	27.13	108	12.79	35.50		100	12.85	35.49	26.82
161	6.73	34.72		150	7.00	34.75	27.21	163	11.83	35.40		150	12.15	35.43	26.91
215	4.86	34.54		200	5.30	34.58	27.32	217	10.45	35.25		200	10.95	35.30	27.04
322	5.89	34.96		300	5.70	34.91	27.54	325	6.45	34.80		300	7.15	34.90	27.34
257	5.15	34.74		400	5.00	34.96	27.67	417	6.32	34.96		400	6.35	34.93	27.47
408	4.96	34.96		600	4.60	34.97	27.72	621	5.08	34.98		600	5.20	34.98	27.65
576	4.67	34.98		800	3.95	34.92	27.75	823	4.49	34.96		800	4.55	34.96	27.72
755	3.95	34.92		1,000	3.90	34.91	27.75	1,030	4.18	34.98		1,000	4.20	34.98	27.77
1,265	3.79	34.89						1,550	3.80	34.97					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4831; May 10; latitude 41°31' N., longitude 48°54' W.; depth 3,200 meters; dynamic height 971.008

0	7.89	32.74	0	7.89	32.74	25.54
27	3.61	33.16	25	3.90	33.15	26.34
53	2.03	33.41	50	2.20	33.40	26.70
80	1.44	33.69	75	1.50	33.64	26.94
105	1.24	33.92	100	1.25	33.88	27.14
159	2.63	34.28	150	2.25	34.22	27.35
212	4.97	34.73	200	4.50	34.67	27.49
317	4.75	34.84	300	4.80	34.82	27.58
402	4.91	34.93	400	4.90	34.93	27.65
599	4.37	34.95	600	4.35	34.95	27.73
795	4.17	34.96	800	4.20	34.96	27.76
998	4.00	34.935	1,000	4.00	34.94	27.76
1,511	3.58	34.905				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4834; May 11; latitude 41°30' N., longitude 50°09' W.; depth 3,779 meters; dynamic height 971.354

0	20.30	36.31	0	20.30	36.31	25.69
26	19.93	36.46	25	19.95	36.46	26.90
51	18.53	36.28	50	18.60	36.28	26.12
76	17.98	36.38	75	18.00	36.38	26.35
102	15.48	35.82	100	15.60	35.84	26.50
152	15.34	36.02	150	15.40	36.02	26.69
203	14.12	35.81	200	14.20	35.82	26.79
305	12.13	35.52	300	12.20	35.53	26.98
401	10.18	35.28	400	10.15	35.29	27.17
595	4.55	34.70	600	4.55	34.70	27.51
787	4.97	34.98	800	5.00	34.98	27.68
996	4.42	34.98	1,000	4.40	34.98	27.74
1,540	3.86	34.94				

Station 4832; May 11; latitude 42°00' N., longitude 49°27' W.; depth 3,011 meters; dynamic height 971.032

0		33.12	0	9.00	33.12	25.67
23	6.83	33.33	25	6.70	33.37	26.20
45	5.18	34.00	50	5.40	34.10	26.94
68	6.37	34.30	75	6.05	34.32	27.03
89	5.34	34.34	100	5.15	34.36	27.17
134	4.60	34.40	150	4.35	34.40	27.29
179	3.77	34.40	200	4.00	34.48	27.39
268	4.91	34.77	300	4.90	34.80	27.55
305	4.91	34.80	400	4.60	34.84	27.61
513	4.22	34.86	600	4.40	34.92	27.70
722	4.64	35.00	800	4.50	34.98	27.73
930	4.05	34.95	1,000	3.95	34.95	27.77
1,452	3.68	34.93				

Station 4835; May 11; latitude 42°02' N., longitude 50°13' W.; depth 3,564 meters; dynamic height 971.048

0	7.96	32.90	0	7.96	32.90	25.65
23	3.37	33.10	25	3.30	33.11	26.37
46	2.93	33.28	50	2.80	33.33	26.59
69	2.04	33.62	75	1.80	33.64	26.92
92	1.13	33.70	100	1.20	33.74	27.04
137	1.99	34.00	150	2.40	34.11	27.25
182	3.66	34.39	200	4.10	34.51	27.41
274	5.04	34.82	300	5.10	34.84	27.56
345	5.15	34.86	400	5.05	34.87	27.59
527	4.64	34.91	600	4.55	34.93	27.69
716	4.46	34.95	800	4.35	34.95	27.73
907	4.17	34.95	1,000	4.05	34.95	27.76
1,402	3.77	34.92				

Station 4833; May 11; latitude 40°59' N., longitude 50°15' W.; depth 3,603 meters; dynamic height 971.698

0	19.71	36.20	0	19.71	36.20	25.78
25	19.76	36.28	25	19.76	36.28	25.82
49	18.84	36.42	50	18.80	36.42	26.17
74	18.37	36.45	75	18.35	36.45	26.32
98	18.18	36.45	100	18.20	36.45	26.35
148	18.10	36.46	150	18.10	36.46	26.38
197	18.03	36.46	200	18.00	36.46	26.41
296	17.82	36.43	300	17.80	36.42	26.43
307	17.82	36.41	400	16.15	36.11	26.58
464		35.88	600	11.55	35.44	27.03
624	10.96	35.37	800	6.80	35.06	27.51
782	7.20	35.06	1,000	5.15	35.03	27.70
1,180	4.56	35.02				

Station 4836 May 11; latitude 42°25.5' N., longitude 50°10' W.; depth 1,929 meters; dynamic height 971.022

0	3.92	32.88	0	3.92	32.88	26.14
25	0.04	33.14	25	0.04	33.14	26.63
50	0.44	33.46	50	0.44	33.46	26.86
75	0.16	33.57	75	0.16	33.57	26.99
99	0.40	33.72	100	0.40	33.72	27.08
148	1.46	34.02	150	1.50	34.03	27.25
198	1.72	34.20	200	1.75	34.21	27.38
297	5.87	34.98	300	5.85	34.98	27.57
369	5.52	34.96	400	5.20	34.95	27.63
555	4.35	34.88	600	4.20	34.88	27.69
743	3.98	34.89	800	3.95	34.89	27.72
938	3.82	34.90	1,000	3.75	34.90	27.75
1,441	3.51	34.88				

Station 4837; May 11-12; latitude 42°45.5' N., longitude 50°09' W.; depth 732 meters; dynamic height 971.088

0	2.80	32.92	0	2.80	32.92	26.27
25	1.52	32.96	25	1.52	32.96	26.39
49	0.36	33.12	50	0.35	33.12	26.59
74	-0.21	33.22	75	-0.25	33.23	26.71
98	-0.39	33.33	100	-0.40	33.34	26.81
146	0.12	33.63	150	0.20	33.66	27.04
196	0.83	33.87	200	0.90	33.89	27.18
294	1.70	34.21	300	1.75	34.23	27.39
375	2.59	34.41	400	2.85	34.46	27.49
576	3.59	34.82	600	3.65	34.85	27.72

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4838; May 12; latitude 42°49.5' N., longitude 50°10' W.; depth 287 meters; dynamic height 971.100						
0	3.46	32.86	0	3.46	32.86	26.16
24	3.09	32.87	25	3.05	32.87	26.21
49	0.83	33.06	50	0.75	33.07	26.53
73	-0.05	33.21	75	-0.15	33.22	26.70
97	-0.43	33.34	100	-0.45	33.35	26.82
146	0.03	33.55	150	0.10	33.58	26.97
194	1.01	33.90	200	1.05	33.92	27.20
243	1.30	34.02				

Station 4839; May 12; latitude 42°58' N., longitude 50°11' W.; depth 88 meters; dynamic height 971.099

0	4.27	32.75	0	4.27	32.75	26.00
21	2.78	32.89	25	2.35	32.91	26.29
43	0.81	32.98	50	0.65	33.03	26.50
64	0.42	33.18	(75)	0.30	33.32	26.76

Station 4840; May 12; latitude 43°11.5' N., longitude 50°17' W.; depth 68 meters; dynamic height 971.121

0	5.44	32.22	0	5.44	32.22	25.45
22	5.00	32.31	25	4.55	32.37	25.67
43	1.69	32.81	(50)	0.95	33.00	26.47

Station 4841; June 4; latitude 47°14' N., longitude 49°12' W.; depth 88 meters; dynamic height 971.071

0	6.70	32.70	0	6.70	32.70	25.67
26	2.83	32.70	25	2.90	32.70	26.08
52	1.78	32.71	50	1.85	32.71	26.17
73	-0.46	33.04	75	-0.55	33.07	26.59

Station 4842; June 4; latitude 47°20.5' N., longitude 48°46' W.; depth 123 meters; dynamic height 971.061

0	6.81	32.58	0	6.81	32.58	25.56
25	1.79	32.67	25	1.79	32.67	26.14
51	-0.70	32.90	50	-0.70	32.90	26.46
76	-0.98	33.19	75	-1.00	33.18	26.70
102	-0.51	33.39	100	-0.55	33.38	26.84

Station 4843; June 4; latitude 47°27' N., longitude 48°23' W.; depth 165 meters; dynamic height 971.069

0	7.45	32.68	0	7.45	32.68	25.56
25	2.63	32.69	25	2.63	32.69	26.09
51	-0.14	32.72	50	-0.10	32.72	26.29
76	-0.85	33.14	75	-0.85	33.11	26.63
101	-0.37	33.34	100	-0.40	33.33	26.80
152	0.35	33.68	150	0.35	33.67	27.04

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4844; June 4; latitude 47°32.5' N., longitude 48°04' W.; depth 212 meters; dynamic height 971.057						
0	7.34	32.56	0	7.34	32.56	25.47
25	1.21	32.70	25	1.21	32.70	26.21
50	-1.01	33.10	50	-1.01	33.10	26.63
75	-1.39	33.24	75	-1.39	33.24	26.76
100	-1.39	33.36	100	-1.39	33.36	26.85
151	-0.43	33.57	150	-0.45	33.57	27.00
201	1.09	33.90	200	1.05	33.89	27.17

Station 4845; June 4; latitude 47°40' N., longitude 47°35' W.; depth 315 meters; dynamic height 971.013

0	7.46	32.73	0	7.46	32.73	25.60
25	3.00	33.21	25	3.00	33.21	26.49
50	0.45	33.24	50	0.45	33.24	26.70
76	-0.72	33.38	75	-0.70	33.38	26.85
101	-0.27	33.58	100	-0.30	33.57	26.99
151	0.89	33.94	150	0.85	33.93	27.21
202	1.63	34.20	200	1.60	34.19	27.37
303	2.75	34.58	300	2.70	34.57	27.59

Station 4846; June 4; latitude 47°45' N., longitude 46°55' N.; depth 695 meters; dynamic height 970.950

0	7.29	32.62	0	7.29	32.62	25.53
25	0.72	33.41	25	0.72	33.41	26.81
50	-0.01	33.64	50	-0.01	33.64	27.03
75	0.75	33.92	75	0.75	33.92	27.22
100	1.14	34.05	100	1.14	34.05	27.29
150	1.77	34.32	150	1.77	34.32	27.47
201	2.26	34.46	200	2.25	34.46	27.54
301	3.10	34.66	300	3.10	34.66	27.63
398	3.41	34.78	400	3.40	34.78	27.69
595	3.52	34.85	600	3.55	34.85	27.73
663	3.55	-----				

Station 4847; June 5; latitude 47°58.5' N., longitude 46°22' W.; depth 1,188 meters; dynamic height 970.905

0	9.20	33.61	0	9.20	33.61	26.02
24	4.73	34.18	25	4.65	34.18	27.08
48	3.23	34.28	50	3.05	34.28	27.32
71	1.54	34.26	75	1.55	34.27	27.44
95	2.06	34.37	100	2.15	34.39	27.49
143	2.47	34.52	150	2.50	34.54	27.58
191	2.79	34.64	200	2.80	34.65	27.64
286	3.15	34.73	300	3.20	34.74	27.68
378	3.41	34.79	400	3.45	34.79	27.69
568	3.59	34.82	600	3.55	34.82	27.71
761	3.48	34.86	800	3.50	34.86	27.75
964	3.44	34.87	(1,000)	3.45	34.87	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4848; June 5; latitude 47°53.5' N., longitude 46°10' W.; depth 1,051 meters; dynamic height 970.906						
0	9.97	33.71	0	9.97	33.71	25.98
24	5.86	34.01	25	5.60	34.02	26.85
47	2.75	34.14	50	2.80	34.17	27.27
71	3.02	34.32	75	3.00	34.33	27.37
94	2.73	34.40	100	2.80	34.42	27.46
141	3.01	34.59	150	3.05	34.61	27.59
189	3.30	34.68	200	3.35	34.70	27.63
283	3.58	34.81	300	3.60	34.81	27.70
364	3.64	34.82	400	3.60	34.82	27.71
552	3.56	34.84	600	3.55	34.85	27.73
746	3.54	34.86	800	3.50	34.86	27.75
945	3.37	34.845	(1,000)	3.35	34.85	27.75
Station 4849; June 5; latitude 47°45.5' N., longitude 45°53' W.; depth 425 meters; dynamic height 970.957						
0	11.05	33.74	0	11.05	33.74	25.81
24	8.10	33.86	25	8.05	33.86	26.39
47	6.04	33.90	50	5.75	33.91	26.75
71	3.87	33.98	75	3.85	34.02	27.05
94	4.11	34.28	100	4.20	34.34	27.26
141	4.27	34.58	150	4.25	34.61	27.47
189	3.99	34.68	200	3.95	34.70	27.57
283	3.87	34.81	300	3.85	34.82	27.68
385	3.79	34.86	400	3.80	34.86	27.72
Station 4850; June 5; latitude 47°41.5' N., longitude 45°44' W.; depth 304 meters; dynamic height 970.967						
0	10.88	33.70	0	10.88	33.70	25.81
24	7.64	33.85	25	7.55	33.85	26.46
49	5.10	33.81	50	5.10	33.81	26.75
73	4.86	34.00	75	4.80	34.01	26.94
97	4.66	34.31	100	4.70	34.33	27.19
146	4.31	34.54	150	4.30	34.55	27.42
194	4.42	34.70	200	4.40	34.71	27.53
291	3.98	34.83	300	3.95	34.84	27.68
Station 4851; June 5; latitude 47°28.5' N., longitude 45°14' W.; depth 224 meters; dynamic height 970.965						
0	10.88	33.73	0	10.88	33.73	25.83
25	6.30	33.72	25	6.30	33.72	26.53
50	5.54	33.78	50	5.54	33.78	26.66
75	4.05	33.89	75	4.05	33.89	26.91
100	3.75	34.20	100	3.75	34.20	27.19
150	3.78	34.48	150	3.78	34.48	27.41
200	3.95	34.70	200	3.95	34.70	27.57
Station 4852; June 5; latitude 47°23.5' N., longitude 45°04' W.; depth 198 meters; dynamic height 970.981						
0	11.15	33.66	0	11.15	33.66	25.72
25	6.65	33.71	25	6.65	33.71	26.48
51	6.04	33.73	50	6.05	33.73	26.56
76	4.35	33.80	75	4.40	33.80	26.81
102	3.54	33.96	100	3.55	33.95	27.02
153	3.84	34.39	150	3.80	34.37	27.33
Station 4853; June 5; latitude 47°23.5' N., longitude 45°12' W.; depth 224 meters; dynamic height 970.962						
0	10.64	33.65	0	10.64	33.65	25.81
24	6.29	33.72	25	6.20	33.72	26.54
49	5.22	33.76	50	5.20	33.76	26.70
73	4.37	33.98	75	4.35	34.00	26.97
98	4.01	34.20	100	4.00	34.22	27.19
146	3.86	34.48	150	3.85	34.50	27.42
195	3.94	34.67	200	3.95	34.69	27.56
Station 4854; June 5; latitude 47°24' N., longitude 45°37' W.; depth 261 meters; dynamic height 970.970						
0	11.42	33.67	0	11.42	33.67	25.68
25	6.68	33.77	25	6.68	33.77	26.52
51	6.29	33.81	50	6.30	33.81	26.60
76	4.30	33.92	75	4.30	33.91	26.91
102	4.07	34.20	100	4.10	34.17	27.14
152	3.87	34.52	150	3.85	34.51	27.43
203	4.08	34.71	200	4.05	34.70	27.56
254	4.00	34.80				
Station 4855; June 5; latitude 47°23' N., longitude 45°57' W.; depth 318 meters; dynamic height 970.969						
0	11.56	33.78	0	11.56	33.78	25.75
24	7.23	33.82	25	7.15	33.82	26.49
49	5.90	33.82	50	5.85	33.82	26.67
73	5.12	33.93	75	5.10	33.95	26.86
98	5.02	34.29	100	5.00	34.30	27.14
147	4.40	34.55	150	4.35	34.56	27.42
195	3.87	34.66	200	3.85	34.67	27.56
293	3.90	34.83	300	3.90	34.84	27.69
Station 4856; June 5; latitude 47°23' N., longitude 46°19' W.; depth 644 meters; dynamic height 970.952						
0	10.87	33.62	0	10.87	33.62	25.75
25	8.90	33.92	25	8.90	33.92	26.31
50	2.93	33.74	50	2.93	33.74	26.90
74	1.95	33.77	75	1.95	33.78	27.01
99	2.86	34.35	100	2.85	34.35	27.40
149	2.68	34.44	150	2.70	34.44	27.48
198	2.76	34.56	200	2.80	34.57	27.58
297	3.66	34.79	300	3.70	34.79	27.67
333	3.68	34.81	400	3.65	34.84	27.71
527	3.63	34.88	(600)	3.60	34.88	27.75
Station 4857; June 5; latitude 47°23' N., longitude 46°32' W.; depth 1,097 meters; dynamic height 970.931						
0	10.23	33.55	0	10.23	33.55	25.80
25	3.13	33.44	25	3.13	33.44	26.65
50	3.51	33.94	50	3.51	33.94	27.01
75	2.48	34.16	75	2.48	34.16	27.28
100	2.78	34.37	100	2.78	34.37	27.42
150	2.67	34.50	150	2.67	34.50	27.54
200	2.98	34.65	200	2.98	34.65	27.63
300	3.41	34.77	300	3.41	34.77	27.69
359	3.52	34.82	400	3.50	34.82	27.72
581	3.56	34.83	600	3.55	34.84	27.72
776	3.56	34.86	800	3.55	34.86	27.74
972	3.51	34.86	(1,000)	3.50	34.86	27.75

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4858; June 5; latitude 47°15' N., longitude 47°18' W.; depth 624 meters; dynamic height 970.960						
0	6.96	32.95	0	6.96	32.95	25.84
25	0.95	33.22	25	0.95	33.22	26.64
50	-0.33	33.59	50	-0.33	33.59	27.00
75	0.06	33.76	75	0.06	33.76	27.13
100	0.66	33.94	100	0.66	33.94	27.23
150	1.44	34.26	150	1.44	34.26	27.44
200	2.04	34.44	200	2.04	34.44	27.54
300	2.75	34.62	300	2.75	34.62	27.63
334	2.90	34.68	400	3.20	34.76	27.70
497	3.49	34.82	(600)	3.55	34.84	27.72

Station 4859; June 5; latitude 47°12.5' N., longitude 47°25' W.; depth 329 meters; dynamic height 970.982

0	7.09	32.76	0	7.09	32.76	25.67
24	0.79	33.14	25	0.70	33.16	26.60
49	-0.21	33.44	50	-0.20	33.44	26.88
73	-0.37	33.59	75	-0.35	33.61	27.02
97	0.54	33.87	100	0.60	33.89	27.19
146	1.27	34.14	150	1.30	34.16	27.37
194	1.92	34.34	200	1.95	34.36	27.49
291	2.60	34.57	(300)	2.65	34.58	27.60

Station 4860; June 6; latitude 47°07' N., longitude 47°26' W.; depth 220 meters; dynamic height 971.026

0	6.88	32.56	0	6.88	32.56	25.53
21	1.56	33.03	25	0.65	33.05	26.52
43	-0.52	33.14	50	-0.55	33.17	26.67
64	-0.52	33.26	75	-0.90	33.30	26.79
85	-1.20	33.35	100	-1.15	33.42	26.91
128	-0.50	33.61	150	0.25	33.80	27.15
170	1.06	33.97	(200)	2.25	34.21	27.34

Station 4861; June 6; latitude 47°02' N., longitude 47°47' W.; depth 174 meters; dynamic height 971.049

0	6.38	32.65	0	6.38	32.65	25.68
25	1.94	32.71	25	1.94	32.71	26.16
50	1.61	32.88	50	1.61	32.88	26.33
75	-1.08	33.24	75	-1.08	33.24	26.75
99	-1.10	33.36	100	-1.10	33.36	26.84
150	0.27	33.75	150	0.25	33.75	27.11

Station 4862; June 6; latitude 46°52.5' N., longitude 48°09' W.; depth 115 meters; dynamic height 971.052

0	6.18	32.67	0	6.18	32.67	25.71
25	3.06	32.76	25	3.06	32.76	26.12
50	0.43	32.90	50	0.43	32.90	26.41
74	-0.76	33.15	75	-0.75	33.15	26.66
99	-0.64	33.36	100	-0.65	33.36	26.83

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4863; June 6; latitude 46°48.5' N., longitude 48°41' W.; depth 88 meters; dynamic height 971.059						
0	6.47	32.69	0	6.47	32.69	25.69
26	3.34	32.73	25	3.40	32.73	26.06
51	1.10	32.78	50	1.15	32.78	26.28
77	-0.30	33.17	75	-0.25	33.14	26.64

Station 4864; June 6; latitude 46°48.5' N., longitude 48°06' W.; depth 110 meters; dynamic height 971.049

0	4.48	32.67	0	4.48	32.67	25.90
25	3.56	32.79	25	3.56	32.79	26.10
50	1.07	32.87	50	1.07	32.87	26.35
74	-0.67	33.26	75	-0.70	33.27	26.76
99	-0.26	33.46	100	-0.25	33.47	26.91

Station 4865; June 6; latitude 46°50' N., longitude 47°38' W.; depth 169 meters; dynamic height 971.052

0	6.66	32.62	0	6.66	32.62	25.62
25	2.62	32.72	25	2.62	32.72	26.12
50	-0.24	33.18	50	-0.24	33.18	26.43
75	-0.69	33.48	75	-0.69	33.48	26.69
100	-0.31	33.48	100	-0.31	33.48	26.91
150	0.71	33.80	150	0.71	33.80	27.12

Station 4866; June 6; latitude 46°49' N., longitude 47°20' W.; depth 320 meters; dynamic height 971.010

0	6.46	32.64	0	6.46	32.64	25.66
24	1.70	33.11	25	1.60	33.12	26.52
47	-0.02	33.20	50	-0.20	33.21	26.70
71	-0.99	33.42	75	-0.95	33.45	26.92
94	-0.20	33.66	100	0.00	33.70	27.08
141	1.11	33.99	150	1.20	34.02	27.27
188	1.39	34.12	200	1.50	34.17	27.37
282	2.62	34.58	(300)	2.85	34.58	27.58

Station 4867; June 6; latitude 46°48.5' N., longitude 47°12' W.; depth 778 meters; dynamic height 970.976

0	6.80	32.78	0	6.80	32.78	25.72
23	1.76	33.20	25	1.60	33.21	26.60
45	0.49	33.33	50	0.30	33.36	26.79
68	-0.13	33.59	75	-0.05	33.65	27.04
90	0.29	33.82	100	0.45	33.89	27.20
135	1.03	34.09	150	1.25	34.16	27.38
181	1.68	34.30	200	1.85	34.35	27.48
271	2.54	34.52	300	2.80	34.59	27.69
341	3.11	34.69	400	3.40	34.77	27.89
532	3.60	34.85	(600)	3.60	34.86	27.74

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4868; June 6; latitude 46°48' N., longitude 46°59' W.; depth 1,207 meters; dynamic height 970.926						
0	7.65	33.07	0	7.65	33.07	25.83
23	1.55	33.51	25	1.55	33.53	26.85
46	1.71	33.85	50	1.75	33.89	27.12
69	1.88	34.07	75	1.80	34.08	27.27
91	1.52	34.12	100	1.55	34.15	27.34
137	1.71	34.30	150	1.95	34.35	27.48
184	2.54	34.49	200	2.80	34.53	27.54
275	3.20	34.70	300	3.20	34.74	27.68
294	3.21	34.74	400	3.40	34.82	27.73
478	3.55	34.85	600	3.55	34.87	27.75
687	3.58	34.87	800	3.55	34.87	27.75
891	3.50	34.87	(1,000)	3.45	34.87	27.76
Station 4869; June 6; latitude 46°48' N., longitude 46°36' W.; depth 595 meters; dynamic height 970.939						
0	8.91	33.47	0	8.91	33.47	25.96
28	8.13	33.90	25	8.25	33.85	26.35
54	4.58	34.10	50	5.15	34.07	26.95
82	4.15	34.31	75	4.25	34.26	27.19
109	3.88	34.45	100	3.95	34.41	27.35
164	3.87	34.67	150	3.90	34.62	27.52
218	3.55	34.74	200	3.60	34.72	27.63
327	3.74	34.84	300	3.70	34.82	27.70
387	3.71	34.86	400	3.70	34.86	27.73
540	3.72	34.86				
Station 4870; June 6; latitude 46°48' N., longitude 46°15' W.; depth 333 meters; dynamic height 970.930						
0	10.42	33.71	0	10.42	33.71	25.90
24	7.16	33.75	25	7.00	33.75	26.46
48	3.52	33.85	50	3.50	33.91	26.99
73	2.93	34.15	75	2.85	34.16	27.25
97	2.54	34.29	100	2.55	34.30	27.39
146	3.41	34.59	150	3.45	34.61	27.55
194	3.92	34.77	200	3.90	34.78	27.64
291	3.90	34.88	300	3.90	34.88	27.72
Station 4871; June 7; latitude 46°48.5' N., longitude 45°48' W.; depth 267 meters; dynamic height 970.974						
0	11.20	33.92	0	11.20	33.92	25.92
24	8.51	33.81	25	8.45	33.81	26.29
47	6.82	33.96	50	6.50	33.96	26.69
71	4.73	33.84	75	4.55	33.85	26.83
94	4.19	34.10	100	4.15	34.15	27.12
142	3.86	34.41	150	3.85	34.46	27.39
189	3.97	34.64	200	3.95	34.68	27.55
236	3.85	34.78				
Station 4872; June 7; latitude 46°48' N., longitude 45°29' W.; depth 231 meters; dynamic height 970.969						
0	10.28	33.66	0	10.28	33.66	25.88
25	6.62	33.72	25	6.62	33.72	26.49
50	5.22	33.76	50	5.22	33.76	26.70
76	4.28	33.85	75	4.35	33.84	26.84
101	4.16	34.15	100	4.15	34.14	27.11
151	3.87	34.47	150	3.90	34.47	27.40
201	3.93	34.68	200	3.95	34.67	27.55
Station 4873; June 7; latitude 46°48' N., longitude 45°08' W.; depth 172 meters; dynamic height 970.967						
0	9.76	33.69	0	9.76	33.69	25.99
26	6.32	33.71	25	6.40	33.71	26.58
52	5.48	33.74	50	5.60	33.74	26.63
78	3.85	33.92	75	4.00	33.90	26.93
104	3.47	34.14	100	3.50	34.11	27.15
157	3.71	34.38	150	3.65	34.35	27.32
Station 4874; June 7; latitude 46°48' N., longitude 44°51' W.; depth 133 meters; dynamic height 970.965						
0	10.54	33.69	0	10.54	33.69	25.86
25	6.32	33.72	25	6.32	33.72	26.53
50	4.60	33.76	50	4.60	33.76	26.76
74	3.33	33.94	75	3.30	33.94	27.03
99	3.48	34.15	100	3.50	34.16	27.19
Station 4875; June 7; latitude 46°40.5' N., longitude 44°48' W.; depth 181 meters; dynamic height 970.971						
0	10.51	33.67	0	10.51	33.67	25.85
24	6.33	33.74	25	6.30	33.74	26.54
48	5.60	33.79	50	5.45	33.79	26.69
71	3.52	33.94	75	3.50	33.96	27.03
95	3.44	34.05	100	3.45	34.08	27.13
143	3.46	34.40	(150)	3.45	34.47	27.44
Station 4876; June 7; latitude 46°37' N., longitude 44°47' W.; depth 224 meters; dynamic height 970.955						
0	10.68	33.76	0	10.68	33.76	25.88
25	6.81	33.74	25	6.81	33.74	26.48
51	5.13	33.99	50	5.20	33.99	26.87
76	3.72	34.11	75	3.75	34.11	27.13
101	3.91	34.40	100	3.90	34.39	27.33
151	3.42	34.60	150	3.40	34.59	27.64
202	3.80	34.74	200	3.80	34.73	27.61

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4877; June 7; latitude 46°30' N., longitude 44°43' W.; depth 626 meters; dynamic height 970.965						
0	11.02	33.92	0	11.02	33.92	25.96
19		33.92	25	8.85	33.94	26.33
39	7.21	34.07	50	6.70	34.12	26.79
58	6.13	34.15	75	3.65	34.16	27.18
78	3.59	34.16	100	3.75	34.29	27.27
116	3.88	34.40	150	3.20	34.48	27.47
155	3.20	34.50	200	3.60	34.67	27.59
233	3.80	34.77	300	3.90	34.84	27.69
360	3.97	34.86	400	3.95	34.86	27.70
532	3.94	34.86	(600)	3.95	34.86	27.70

Station 4878; June 7; latitude 46°23' N., longitude 44°41' W.; depth 1,701 meters; dynamic height 970.989

0	12.55	34.16	0	12.55	34.16	25.85
27	9.71	34.30	25	9.90	34.29	26.43
53	8.10	34.32	50	8.39	34.32	26.72
80	5.46	34.17	75	5.75	34.18	26.95
106	4.91	34.29	100	5.00	34.28	27.12
161	3.64	34.38	150	3.75	34.36	27.32
214	4.06	34.62	200	4.05	34.57	27.46
320	3.67	34.75	300	3.75	34.72	27.61
338	3.88	34.82	400	3.85	34.84	27.69
513	3.66		600	3.60	34.86	27.74
692	3.53	34.87	800	3.50	34.88	27.76
880	3.51	34.88	1,000	3.50	34.88	27.76
1,373	3.43	34.88				

Station 4879; June 7; latitude 46°03' N., longitude 44°41' W.; depth 3,475 meters; dynamic height 971.091

0	13.06	34.25	0	13.06	34.25	25.82
28	13.17	35.11	25	13.15	35.04	26.41
57	12.65	35.34	50	12.75	35.29	26.69
85	12.53	35.43	75	12.55	35.41	26.82
112	10.96	35.17	100	11.75	35.30	26.89
169	8.53	34.94	150	9.20	34.98	27.09
226	8.50	35.07	200	8.50	35.02	27.23
338	5.99	34.90	300	6.80	34.94	27.42
446	5.23	34.96	400	5.50	34.94	27.59
670	4.37	34.92	600	4.60	34.94	27.69
895	3.74	34.89	800	3.95	34.89	27.72
1,120	3.60	34.89	1,000	3.65	34.89	27.75
1,682	3.42	34.895				

Station 4880; June 7; latitude 46°08.5' N., longitude 45°24' W.; depth 2,487 meters; dynamic height 971.043

0	10.90	33.84	0	10.90	33.84	25.91
25	10.59	34.20	25	10.59	34.20	26.24
49	8.92	34.60	50	8.95	34.64	26.86
74	9.08	34.80	75	9.05	34.80	26.97
98	7.52	34.63	100	7.55	34.63	27.06
148	7.75	34.85	150	7.75	34.85	27.21
196	6.22	34.78	200	6.20	34.78	27.37
294	5.75	34.93	300	5.70	34.93	27.55
375	4.77	34.86	400	4.70	34.86	27.62
563	4.47	34.92	600	4.35	34.91	27.70
754	3.89	34.87	800	3.85	34.87	27.72
951	3.75	34.88	1,000	3.70	34.88	27.74
1,458	3.39	34.84				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4881; June 7-8; latitude 46°11' N., longitude 46°09' W.; depth 1,371 meters; dynamic height 970.983						
0	9.79	33.76	0	9.79	33.76	26.04
26	9.59	33.92	25	9.60	33.92	26.20
51	7.54	33.82	50	7.60	33.82	26.42
78	1.33	33.71	75	1.35	33.72	27.02
103	2.67	34.15	100	2.65	34.12	27.24
155	1.90	34.28	150	1.95	34.26	27.41
206	2.27	34.44	200	2.20	34.42	27.52
309	3.71	34.75	300	3.60	34.73	27.63
341	3.99	34.82	400	4.20	34.90	27.71
525	4.34	34.96	600	4.25	34.95	27.74
720	4.00	34.92	800	3.80	34.90	27.75
914	3.57	34.88	1,000	3.50	34.88	27.76
1,181	3.47	34.87				

Station 4882; June 8; latitude 46°14' N., longitude 46°45' W.; depth 932 meters; dynamic height 970.969

0	8.87	33.42	0	8.87	33.42	25.93
24	7.62	33.57	25	7.55	33.57	26.24
50	2.49	33.64	50	2.50	33.64	26.86
74	1.35	33.85	75	1.35	33.85	27.12
100	1.84	34.14	100	1.85	34.15	27.32
149	2.17	34.35	150	2.15	34.35	27.46
198	2.57	34.48	200	2.60	34.48	27.52
298	4.42	34.84	300	4.40	34.84	27.63
373	4.05	34.85	400	4.00	34.85	27.69
567	3.86	34.88	600	3.85	34.88	27.72
776	3.68	34.90	(800)	3.65	34.90	27.76

Station 4883; June 8; latitude 46°15' N., longitude 47°29' W.; depth 535 meters; dynamic height 971.002

0	6.28	32.64	0	6.28	32.64	25.68
26	2.09	33.09	25	2.15	33.08	26.45
53	-1.17	33.33	50	-1.10	33.30	26.79
79	-0.50	33.61	75	-0.65	33.57	27.01
106	0.16	33.80	100	0.00	33.76	27.13
157	1.40	34.08	150	1.30	34.04	27.27
210	1.69	34.24	200	1.65	34.21	27.39
316	2.63	34.58	300	2.45	34.54	27.58
400	3.12	34.71	400	3.10	34.71	27.67
489	3.38	34.80				

Station 4884; June 8; latitude 46°14' N., longitude 47°51' W.; depth 169 meters; dynamic height 971.052

0	5.76	32.67	0	5.76	32.67	25.77
23	2.46	32.70	25	2.25	32.71	26.14
46	0.00	33.10	50	-0.35	33.12	26.62
68	-1.22	33.24	75	-1.25	33.27	26.78
91	-1.25	33.34	100	-1.15	33.39	26.88
137	0.07	33.67	(150)	0.55	33.79	27.12

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4885; June 8; latitude 46°14.5' N., longitude 48°04' W.; depth 115 meters; dynamic height 971.055						
0	5.97	32.68	0	5.97	32.68	25.76
25	2.04	32.80	25	2.04	32.80	26.24
50	-0.59	33.06	50	-0.59	33.06	26.58
76	-0.89	33.26	75	-0.90	33.26	26.76
101	-0.54	33.37	100	-0.55	33.37	26.83
Station 4886; June 8; latitude 46°16' N., longitude 48°32' W.; depth 93 meters; dynamic height 971.071						
0	5.98	32.68	0	5.98	32.68	25.75
28	4.83	32.72	25	5.00	32.72	25.89
55	0.00	32.92	50	0.55	32.86	26.37
82	-0.32	33.27	75	-0.30	33.18	26.67
Station 4887; June 8; latitude 46°17' N., longitude 48°57' W.; depth 59 meters; dynamic height 971.075						
0	6.16	32.66	0	6.16	32.66	25.71
25	3.86	32.64	25	3.86	32.64	25.95
50	2.24	32.74	50	2.24	32.74	26.17
Station 4888; June 8; latitude 46°07.5' N., longitude 48°40' W.; depth 80 meters; dynamic height 971.090						
0	6.20	32.68	0	6.20	32.68	25.72
25	5.55	32.69	25	5.55	32.69	25.80
51	2.08	32.80	50	2.10	32.79	26.22
76	-0.14	33.02	75	-0.15	33.01	26.54
Station 4889; June 8-9; latitude 46°01.5' N., longitude 48°29' W.; depth 84 meters; dynamic height 971.075						
0	5.98	32.70	0	5.98	32.70	25.76
27	5.97	32.73	25	5.95	32.72	25.79
54	0.38	32.85	50	0.80	32.93	26.42
81	-0.31	33.03	75	-0.25	32.98	26.51
Station 4890; June 9; latitude 45°52.5' N., longitude 48°12' W.; depth 104 meters; dynamic height 971.050						
0	6.20	32.70	0	6.20	32.70	25.73
25	2.97	32.81	25	2.97	32.81	26.17
50	-0.83	33.27	50	-0.88	33.27	26.77
75	-0.81	33.29	75	-0.81	33.29	26.77
95	-0.21	33.43	(100)	-0.05	33.47	26.90
Station 4891; June 9; latitude 45°45.5' N., longitude 48°00' W.; depth 176 meters; dynamic height 971.048						
0	5.40	32.70	0	5.40	32.70	25.83
25	0.00	32.93	25	0.00	32.93	26.46
51	-0.04	33.12	50	-0.05	33.11	26.60
76	-1.48	33.28	75	-1.50	33.28	26.79
101	-1.42	33.36	100	-1.40	33.36	26.84
152	-0.39	33.52	150	-0.45	33.51	26.95
Station 4892; June 9; latitude 45°39' N., longitude 47°50' W.; depth 640 meters; dynamic height 971.009						
0	5.78	32.62	0	5.78	32.62	25.72
24	1.10	33.02	25	1.05	33.03	26.49
48	0.78	33.09	50	0.60	33.10	26.66
72	-1.19	33.35	75	-1.21	33.37	26.86
96	-0.85	33.51	100	-0.75	33.54	26.98
144	1.06	34.06	150	1.20	34.10	27.33
192	1.76	34.28	200	1.80	34.30	27.45
288	2.35	34.48	300	2.45	34.50	27.55
354	2.83	34.62	400	3.15	34.70	27.65
470	3.45	34.80	(600)	3.50	34.85	27.74
Station 4893; June 9; latitude 45°33' N., longitude 47°40' W.; depth 1,317 meters; dynamic height 970.932						
0	7.79	33.00	0	7.79	33.00	25.76
26	3.97	33.65	25	4.20	33.62	26.70
52	1.59	33.90	50	1.60	33.88	27.12
78	1.42	34.09	75	1.45	34.06	27.28
104	1.66	34.22	100	1.60	34.20	27.38
155	2.38	34.50	150	2.35	34.48	27.54
207	2.64	34.56	200	2.60	34.55	27.58
311	3.33	34.74	300	3.25	34.72	27.66
409	3.61	34.81	400	3.60	34.81	27.70
613	3.60	34.86	600	3.60	34.86	27.74
819	3.51	34.86	800	3.50	34.86	27.75
1,025	3.47	34.86	1,000	3.45	34.86	27.75
Station 4894; June 9; latitude 45°20' N., longitude 47°20' W.; depth 2,377 meters; dynamic height 970.945						
0	7.62	32.82	0	7.62	32.82	25.64
27	2.30	33.44	25	2.65	33.41	26.67
53	-0.36	33.56	50	-0.35	33.55	26.96
79	0.22	33.79	75	0.05	33.75	27.12
105	1.44	34.15	100	1.25	34.07	27.31
159	2.68	34.43	150	2.50	34.40	27.47
211	3.07	34.57	200	3.00	34.54	27.54
316	3.57	34.80	300	3.75	34.77	27.65
360	4.11	34.86	400	4.10	34.89	27.71
540	4.01	34.92	600	3.95	34.92	27.75
720	3.82	34.92	800	3.70	34.91	27.77
910	3.59	34.90	1,000	3.55	34.90	27.77
1,402	3.44	34.90				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ_t
Depth, meters	Temperature, ° C	Salinity, ‰	Depth, meters	Temperature, ° C	Salinity, ‰	
Station 4895; June 9; latitude 45°20' N., longitude 46°40' W.; depth 2,926 meters; dynamic height 970.969						
0	9.83	33.67	0	9.83	33.67	25.96
25	8.50	33.78	25	8.50	33.78	26.26
51	5.76	34.00	50	5.80	33.99	26.80
76	4.50	34.12	75	4.50	34.11	27.05
102	4.31	34.34	100	4.35	34.34	27.24
151	3.98	34.46	150	4.00	34.45	27.37
202	3.58	34.58	200	3.55	34.58	27.51
304	3.46	34.68	300	3.45	34.68	27.60
423	3.47	34.76	400	3.45	34.75	27.66
632	3.40	34.85	600	3.40	34.84	27.74
839	3.28	34.90	800	3.30	34.89	27.79
1,048	3.26	34.915	1,000	3.25	34.91	27.81
1,566	3.08	34.91				

Station 4896; June 9; latitude 45°20' N., longitude 45°57' W.; depth 3,310 meters; dynamic height 970.949

0	10.97	33.62	0	10.97	33.62	25.74
25	7.31	33.77	25	7.31	33.77	26.43
50	4.30	33.93	50	4.30	33.93	26.92
74	2.58	34.06	75	2.55	34.06	27.20
99	2.41	34.17	100	2.40	34.17	27.30
149	3.73	34.58	150	3.75	34.58	27.49
198	4.46	34.77	200	4.45	34.77	27.58
297	4.51	34.90	300	4.50	34.90	27.67
363	4.43	34.92	400	4.30	34.91	27.70
544	3.70	34.88	600	3.70	34.88	27.74
725	3.83	34.92	800	3.80	34.92	27.77
914	3.73	34.91	1,000	3.70	34.91	27.77
1,396	3.57	34.92				

Station 4897; June 10; latitude 45°20' N., longitude 45°15' W.; depth 3,749 meters; dynamic height 971.010

0	11.15	33.72	0	11.15	33.72	25.78
24	9.65	33.94	25	9.60	33.94	26.21
48	7.42	33.87	50	7.25	33.87	26.51
71	6.08	34.28	75	5.50	34.27	27.06
95	1.54	33.93	100	1.55	33.95	27.18
143	3.95	34.38	150	4.20	34.43	27.33
191	4.78	34.64	200	4.85	34.68	27.46
286	5.15	34.88	300	5.15	34.90	27.60
432	4.88	34.97	400	4.95	34.96	27.67
645	3.89	34.89	600	4.00	34.90	27.73
857	3.81	34.89	800	3.80	34.89	27.74
1,073	3.64	34.90	1,000	3.70	34.89	27.75
1,614	3.50	34.91				

Station 4898; June 10; latitude 44°49.5' N., longitude 45°15' W.; depth 2,560 meters; dynamic height 971.065

0	12.93	34.15	0	12.93	34.15	25.77
25	12.97	34.43	25	12.97	34.43	25.98
49	12.39	35.24	50	12.35	35.25	26.74
74	12.08	35.36	75	12.05	35.36	26.88
98	35.22	100	100	10.85	35.21	26.99
148	35.09	150	150	9.45	35.08	27.12
197	6.60	34.69	200	6.55	34.69	27.25
295	5.24	34.77	300	5.20	34.78	27.49
397	4.83	34.89	400	4.80	34.89	27.63
594	3.96	34.87	600	3.95	34.87	27.71
789	3.75	34.90	800	3.75	34.90	27.75
988	3.68	34.90	1,000	3.70	34.90	27.76
1,483	3.51	34.89				

Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4899; June 10; latitude 44°25.5' N., longitude 45°28' W.; depth 4,115 meters; dynamic height 971.238						
0	16.00	35.42	0	16.00	35.42	26.09
25	15.99	35.42	25	15.99	35.42	26.10
50	16.13	35.87	50	15.13	35.87	26.40
75	15.01	35.72	75	15.01	35.72	26.54
100	14.22	35.68	100	14.22	35.68	26.69
150	13.92	35.70	150	13.92	35.70	26.75
201	13.00	35.54	200	13.00	35.55	26.84
301	9.32	35.05	300	9.30	35.05	27.13
346	8.78	35.08	400	7.65	35.02	27.36
511	5.49	34.86	600	4.95	34.91	27.63
671	4.68	34.94	800	4.35	34.95	27.73
849	4.26	34.955	1,000	4.00	34.94	27.76
1,311	3.52	34.89				

Station 4900; June 10; latitude 44°32' N., longitude 46°05' W.; depth 3,749 meters; dynamic height 971.178

0	15.03	35.08	0	15.03	35.08	26.04
27	16.12	35.58	25	16.10	35.56	26.17
53	15.62	35.84	50	15.70	35.83	26.46
80	14.62	35.77	75	14.80	35.78	26.63
106	13.91	35.68	100	14.05	35.70	26.73
160	12.71	35.51	150	13.00	35.55	26.84
212	10.49	35.19	200	11.00	35.28	27.01
318	7.69	34.94	300	8.00	34.95	27.26
422	6.50	34.98	400	6.70	34.97	27.46
629	4.88	34.98	600	5.05	34.98	27.67
836	4.30	34.96	800	4.35	34.96	27.74
1,046	3.98	34.94	1,000	4.05	34.94	27.75
1,570	3.64	34.94				

Station 4901; June 10; latitude 44°35.5' N., longitude 46°42' W.; depth 3,841 meters; dynamic height 971.115

0	11.49	33.68	0	11.49	33.68	25.68
25	11.99	34.06	25	11.99	34.06	25.88
50	12.08	35.16	50	12.08	35.16	26.73
74	12.58	35.45	75	12.55	35.45	26.85
100	12.65	35.53	100	12.65	35.53	26.89
149	6.07	34.39	150	6.10	34.39	27.08
199	7.92	34.54	200	7.90	34.84	27.18
299	7.17	34.96	300	7.15	34.96	27.39
378	6.29	34.97	400	6.00	34.96	27.54
565	4.21	34.86	600	4.15	34.86	27.68
751	4.01	34.91	800	3.95	34.91	27.74
943	3.75	34.90	1,000	3.75	34.90	27.75
1,432	3.54	34.90				

Station 4902; June 10; latitude 44°43' N., longitude 47°19' W.; depth 3,749 meters; dynamic height 971.102

0	11.92	34.05	0	11.92	34.05	25.89
24	13.45	34.76	25	13.45	34.80	26.17
49	13.82	35.68	50	13.80	35.68	26.77
73	13.24	35.59	75	13.20	35.58	26.82
98	12.82	35.54	100	12.75	35.53	26.87
146	10.69	35.20	150	10.30	35.21	27.08
195	7.00	34.66	200	7.00	34.66	27.17
293	7.19	34.93	300	7.15	34.93	27.36
411	5.90	34.95	400	6.00	34.95	27.53
612	4.35	34.92	600	4.40	34.92	27.70
811	3.80	34.91	800	3.80	34.91	27.76
1,014	3.75	34.93	1,000	3.75	34.93	27.77
1,526	3.46	34.92				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4903; June 10-11; latitude 44°46' N., longitude 47°56' W.; depth 3,563 meters; dynamic height 971.083						
0	11.13	33.76	0	11.13	33.76	25.80
25	11.32	33.95	25	11.32	33.95	25.92
50	8.57	34.33	50	8.57	34.33	26.68
75	8.51	34.72	75	8.51	34.72	27.00
99	7.04	34.56	100	7.05	34.56	27.09
149	7.14	34.71	150	7.15	34.71	27.19
199	4.91	34.48	200	4.90	34.48	27.29
298	5.38	34.78	300	5.40	34.78	27.47
405	5.07	34.87	400	5.10	34.87	27.58
605	3.51	34.77	600	3.50	34.77	27.68
804	3.71	34.86	800	3.80	34.86	27.72
1,004	3.59	34.89	1,000	3.60	34.89	27.76
1,504	3.34	34.90				
Station 4904; June 11; latitude 44°50.5' N., longitude 48°30' W.; depth 2,633 meters; dynamic height 970.967						
0	10.37	33.51	0	10.37	33.51	25.75
25	11.13	34.59	25	11.13	34.59	26.45
50	6.35	34.29	50	6.35	34.29	26.96
75	3.88	34.14	75	3.88	34.14	27.13
100	4.34	34.31	100	4.34	34.31	27.22
150	1.47	34.16	150	1.47	34.16	27.36
199	1.98	34.37	200	2.00	34.37	27.49
299	5.01	34.91	300	5.00	34.91	27.63
390	4.83	34.96	400	4.80	34.96	27.69
583	4.26	34.96	600	4.20	34.96	27.76
775	3.82	34.905	800	3.75	34.91	27.76
969	3.61	34.92	1,000	3.60	34.92	27.79
1,459	3.47	34.90				
Station 4905; June 11; latitude 44°53' N., longitude 48°47' W.; depth 1,939 meters; dynamic height 970.997						
0	10.72	33.71	0	10.72	33.71	25.85
23	10.58	33.70	25	10.55	33.70	25.87
45	7.46	33.93	50	6.85	33.96	26.64
68	4.80	34.04	75	4.60	34.06	27.00
91	4.20	34.12	100	4.05	34.15	27.13
135	3.67	34.30	150	3.75	34.38	27.34
180	4.27	34.57	200	4.65	34.69	27.49
271	5.54	34.96	300	5.40	34.97	27.63
347	5.14	34.98	400	4.90	34.97	27.69
537	4.38	34.95	600	4.10	34.95	27.76
739	3.81		800	3.80	34.93	27.77
933	3.83	34.94	1,000	3.80	34.93	27.77
1,412	3.42	34.90				
Station 4906; June 11; latitude 44°55' N., longitude 49°01' W.; depth 278 meters; dynamic height 971.015						
0	6.87	32.67	0	6.87	32.67	25.63
24	5.64	32.84	25	5.60	32.85	25.92
49	0.56	33.18	50	0.45	33.19	26.65
73	-0.05	33.49	75	-0.05	33.63	27.02
98	6.84	34.65	100	6.85	34.66	27.19
146	6.31	34.75	150	6.15	34.74	27.35
195	4.27	34.59	200	4.15	34.58	27.45
268	2.82	34.54				
Station 4907; June 11; latitude 44°56.5' N., longitude 49°08' W.; depth 93 meters; dynamic height 971.022						
0	6.28	32.71	0	6.28	32.71	25.73
25	3.80	32.84	25	3.80	32.84	26.12
50	0.12	33.15	50	0.12	33.15	26.64
75	-1.04	33.32	75	-1.04	33.32	26.81
Station 4908; June 11; latitude 45°01.5' N., longitude 49°39' W.; depth 75 meters; dynamic height 971.047						
0	5.75	32.77	0	5.75	32.77	25.85
26	4.55	32.77	25	4.60	32.77	25.97
52	1.20	33.02	50	1.40	33.01	26.45
			(75)	0.10	33.46	26.88
Station 4909; June 11; latitude 44°13' N., longitude 49°20' W.; depth 75 meters; dynamic height 971.036						
0	6.02	32.81	0	6.02	32.81	25.85
25	2.63	33.00	25	2.63	33.00	26.35
51	-0.41	33.17	50	-0.40	33.16	26.66
			(75)	-1.00	33.36	26.83
Station 4910; June 11; latitude 44°12' N., longitude 49°15' W.; depth 119 meters; dynamic height 971.044						
0	6.20	32.79	0	6.20	32.79	25.81
24	4.87	32.89	25	4.55	32.90	26.08
47	-0.69	33.08	50	-0.75	33.11	26.63
71	-1.04	33.28	(75)	-1.10	33.32	26.81
			(100)	-1.20	33.52	26.99
Station 4911; June 11; latitude 44°10.5' N., longitude 49°09' W.; depth 531 meters; dynamic height 971.028						
0	6.41	32.80	0	6.41	32.80	25.79
20	1.81	33.04	25	1.10	33.07	26.51
39	-0.32	33.15	50	-0.70	33.18	26.69
59	-0.87	33.22	75	-0.95	33.30	26.79
79	-0.92	33.32	100	-0.90	33.40	26.88
118	-0.77	33.46	150	-0.10	33.64	27.03
157	0.08	33.69	200	1.65	34.06	27.27
236	2.96	34.36	(300)	3.45	34.66	27.59
			(400)	3.55	34.81	27.70
Station 4912; June 11; latitude 44°09' N., longitude 49°04' W.; depth 1,371 meters; dynamic height 971.028						
0	6.34	32.82	0	6.34	32.82	25.82
25	2.85	32.94	25	2.85	32.94	26.28
50	0.08	33.10	50	0.08	33.10	26.59
75	-0.84	33.20	75	-0.84	33.20	26.71
100	-0.96	33.39	100	-0.96	33.39	26.87
150	0.23	33.72	150	0.23	33.72	27.09
199	2.70	34.28	200	2.70	34.29	27.36
299	3.19	34.66	300	3.20	34.66	27.62
378	3.16	34.71	400	3.20	34.73	27.67
568	3.78	34.88	600	3.75	34.88	27.73
759	3.53	34.87	800	3.50	34.87	27.76
955	3.51		1,000	3.50	34.87	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4913; June 11-12; latitude 44°07' N., longitude 48°57' W.; depth 1,939 meters; dynamic height 971.026						
0	5.90	32.67	0	5.90	32.67	25.75
25	1.82	32.66	25	1.82	32.66	26.13
50	-1.26	33.24	50	-1.26	33.24	26.75
75	-0.71	33.38	75	-0.71	33.38	26.85
99	-0.03	33.60	100	0.00	33.60	27.00
149	1.27	33.96	150	1.30	33.97	27.22
199	2.22	34.27	200	2.30	34.28	27.59
298	5.24	34.88	300	5.25	34.88	27.57
391	5.10	34.98	400	5.05	34.98	27.67
587	4.05	34.92	600	4.00	34.91	27.74
783	3.77	34.87	800	3.75	34.89	27.74
983	3.61	34.87	1,000	3.60	34.87	27.75
1,493	3.43	34.87				

Station 4914; June 12; latitude 44°02' N., longitude 48°37' W.; depth 3,109 meters; dynamic height 971.062

0	10.38	33.42	0	10.38	33.42	25.67
25	9.43	33.37	25	9.43	33.37	25.80
52	4.76	33.37	50	5.05	33.37	26.39
77	2.95	33.53	75	3.05	33.51	26.72
103	1.63	33.76	100	1.65	33.73	27.00
154	2.35	34.03	150	2.25	34.00	27.17
206	3.55	34.31	200	3.40	34.28	27.29
309	4.54	34.76	300	4.55	34.73	27.53
388	4.55	34.92	400	4.55	34.92	27.69
581	3.96	34.89	600	3.90	34.89	27.73
772	3.75	34.86	800	3.75	34.87	27.73
965	3.65	34.88	1,000	3.65	34.88	27.74
1,447	3.45	34.89				

Station 4915; June 12; latitude 43°52' N., longitude 47°59' W.; depth 3,658 meters; dynamic height 970.983

0	9.50	33.29	0	9.50	33.29	25.71
27	8.06	34.34	25	8.25	34.28	26.69
53	3.42	33.56	50	4.10	33.63	26.71
80	2.04	33.89	75	2.10	33.82	27.04
106	2.09	34.10	100	2.10	34.07	27.24
160	2.26	34.27	150	2.20	34.23	27.36
213	3.18	34.51	200	2.85	34.44	27.47
319	4.43	34.84	300	4.35	34.50	27.61
416	4.41	34.90	400	4.40	34.89	27.67
617	4.25	34.95	600	4.25	34.95	27.74
814	3.83	34.90	800	3.85	34.90	27.74
1,020	3.65	34.93	1,000	3.65	34.93	27.78
1,540	3.48	34.90				

Station 4916; June 12; latitude 43°40' N., longitude 47°15' W.; depth 3,841 meters; dynamic height 971.128

0	13.84	34.51	0	13.84	34.51	25.86
25	14.57	35.16	25	14.57	35.16	26.21
50	12.84	35.30	50	12.84	35.30	26.68
75	13.64	35.62	75	13.64	35.62	26.76
100	12.90	35.50	100	12.90	35.50	26.82
150	12.18	35.49	150	12.18	35.49	26.96
201	10.31	35.27	200	10.40	35.27	27.11
301	7.85	35.04	300	7.85	35.04	27.35
384	5.43	34.81	400	5.35	34.82	27.51
578	4.84	34.97	600	4.80	34.97	27.70
774	4.43	34.98	800	4.35	34.98	27.75
970	3.90	34.93	1,000	3.90	34.93	27.76
1,466	3.55	34.92				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4917; June 12; latitude 43°29' N., longitude 46°32' W.; depth 4,115 meters; dynamic height 971.057						
0	12.22	33.40	0	12.22	33.40	25.33
25	10.17	33.45	25	10.17	33.45	25.74
49	7.75	33.88	50	7.75	33.89	26.45
74	6.33	34.24	75	6.25	34.25	26.95
99	5.82	34.34	100	5.80	34.34	27.08
148	4.13	34.36	150	4.15	34.37	27.29
197	5.99	34.72	200	6.00	34.73	27.36
296	5.36	34.82	300	5.30	34.82	27.52
401	4.49	34.85	400	4.50	34.85	27.63
600	4.47	34.95	600	4.45	34.95	27.72
799	4.03	34.93	800	4.00	34.93	27.75
1,000	3.77	34.92	1,000	3.75	34.92	27.77
1,503	3.48	34.92				

Station 4918; June 12; latitude 43°18.5' N., longitude 45°53' W.; depth 3,749 meters; dynamic height 971.208

0	13.28	33.46	0	13.28	33.46	25.16
20	15.63	35.20	25	15.62	35.22	26.02
39	14.63	35.26	50	14.00	35.25	26.40
59	13.45	35.24	75	13.45	35.40	26.63
79	13.38	35.42	100	13.15	35.41	26.70
117	12.94	35.40	150	12.40	35.39	26.83
156	12.30	35.38	200	7.40	34.57	27.05
235	5.47	34.33	300	6.75	34.62	27.18
311	6.45	34.36	400	6.35	34.82	27.39
301	6.76	34.63	600	4.90	34.96	27.68
578	6.71	34.84	(800)	4.40	34.95	27.72
456	5.09	34.97	(1,000)	3.90	34.93	27.76
622	4.85	34.97				

Station 4919; June 12; latitude 43°10' N., longitude 45°21' W.; depth 4,663 meters; dynamic height 971.565

0	19.99	36.14	0	19.99	36.14	25.65
26	18.87	36.32	25	18.85	36.31	26.07
52	18.65	36.40	50	18.65	36.39	26.19
78	18.13	36.38	75	18.15	36.38	26.31
104	18.01	36.40	100	18.05	36.40	26.35
154	18.05	36.46	150	18.05	36.45	26.39
206	17.50	36.39	200	17.60	36.40	26.46
310	15.80	36.09	300	16.00	36.12	26.62
389	14.18	35.84	400	13.95	35.81	26.84
570	10.27	35.32	600	9.50	35.24	27.24
744	5.68	34.95	800	5.45	34.96	27.61
916	5.17	34.97	1,000	4.90	34.97	27.69
1,325	3.94	34.94				

Station 4920; June 13; latitude 42°50' N., longitude 45°38' W.; depth 4,627 meters; dynamic height 971.611

0	19.76	36.36	0	19.76	36.36	25.89
24	18.87	36.32	25	18.85	36.32	26.09
48	18.33	36.36	50	18.30	36.36	26.26
72	18.03	36.39	75	18.00	36.39	26.36
96	17.65	36.45	100	17.80	36.45	26.45
145	17.65	36.41	150	17.65	36.41	26.46
193	17.54	36.41	200	17.50	36.41	26.50
289	16.94	36.32	300	16.85	36.31	26.57
347	16.61	36.27	400	15.35	36.13	26.78
509	16.47	35.74	600	10.60	35.39	27.17
663	9.16	35.18	800	6.90	35.06	27.50
846	6.47	35.04	1,000	5.55	35.02	27.65
1,332	4.52	35.02				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4921; June 13; latitude 42°31.5' N., longitude 45°54' W.; depth 4,572 meters; dynamic height 971.569						
0	19.49	36.31	0	19.49	36.31	25.91
25	18.41	36.31	25	18.41	36.31	26.19
51	18.23	36.32	50	18.25	36.32	26.24
76	17.67	36.31	75	17.60	36.31	26.39
102	17.40	36.30	100	17.45	36.30	26.42
152	16.92	36.25	150	16.95	36.25	26.50
202	16.76	36.26	200	16.80	36.26	26.54
304	15.87	36.10	300	15.95	36.11	26.63
482	12.79	35.63	400	14.30	35.87	26.81
720	7.08	35.01	600	10.05	35.28	27.18
955	5.07	34.98	800	6.00	34.99	27.56
1,195	4.56	35.02	1,000	4.90	34.99	27.70
1,805	3.71	34.94				

Station 4922; June 13; latitude 42°48' N., longitude 46°48' W.; depth 3,749 meters; dynamic height 971.039

0	11.89	33.43	0	11.89	33.43	25.42
25	10.20	34.39	25	10.20	34.39	26.46
50	12.85	35.46	50	12.85	35.46	26.80
75	11.11	35.19	75	11.11	35.19	26.92
101	8.86	34.90	100	8.90	34.91	27.08
151	8.15	34.94	150	8.15	34.94	27.22
201	6.16	34.69	200	6.20	34.69	27.30
302	5.32	34.83	300	5.30	34.82	27.52
411	5.20	34.96	400	5.20	34.96	27.64
617	4.36	34.95	600	4.40	34.95	27.72
822	3.95	34.93	800	3.95	34.93	27.75
1,028	3.77	34.93	1,000	3.75	34.93	27.77

Station 4923; June 13; latitude 42°59' N., longitude 47°29' W.; depth 3,658 meters; dynamic height 971.016

0	12.88	33.84	0	12.88	33.84	25.53
25	9.71	33.54	25	9.71	33.54	25.88
50	4.92	33.99	50	4.92	33.99	26.91
75	6.45	34.44	75	6.45	34.44	27.07
100	5.26	34.37	100	5.26	34.37	27.16
150	5.69	34.64	150	5.69	34.64	27.32
201	4.67	34.61	200	4.70	34.61	27.42
301	4.01	34.68	300	4.00	34.68	27.55
405	3.22	34.70	400	3.20	34.70	27.65
609	4.46	34.98	600	4.40	34.98	27.74
815	4.11	34.95	800	4.15	34.95	27.75
1,020	3.79	34.93	1,000	3.80	34.93	27.77
1,536	3.47	34.92				

Station 4924; June 13; latitude 43°09.5' N., longitude 48°10' W.; depth 3,658 meters; dynamic height 970.971

0	9.73	33.20	0	9.73	33.20	25.61
25	8.29	33.27	25	8.29	33.27	25.88
49	4.01	33.64	50	4.00	33.67	26.76
74	3.60	34.06	75	3.50	34.06	27.11
98	2.32	34.17	100	2.30	34.17	27.31
148	2.20	34.36	150	2.20	34.37	27.48
197	3.87	34.67	200	3.90	34.67	27.56
295	3.68	34.76	300	3.70	34.76	27.65
376	4.29	34.88	400	4.30	34.90	27.69
573	4.08	34.92	600	4.00	34.92	27.75
775	3.71	34.91	800	3.65	34.91	27.77
973	3.58	34.90	1,000	3.55	34.90	27.77
1,475	3.47	34.92				

Observed values			Scaled values			σ _t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4925; June 14; latitude 43°20' N., longitude 48°50' W.; depth 2,560 meters; dynamic height 970.985						
0	10.66	33.41	0	10.66	33.41	25.62
25	10.50	33.41	25	10.50	33.41	25.65
49	4.36	33.64	50	4.25	33.65	26.71
74	1.74	33.84	75	1.75	33.85	27.09
99	2.79	34.22	100	2.80	34.23	27.31
148	3.77	34.59	150	3.80	34.60	27.51
197	4.34	34.75	200	4.35	34.76	27.58
296	4.62	34.88	300	4.65	34.88	27.64
397	4.48	34.92	400	4.45	34.92	27.70
600	4.08	34.92	600	4.05	34.92	27.74
808	3.80	34.90	800	3.80	34.90	27.75
1,012	3.55	34.88	1,000	3.55	34.88	27.75
1,528	3.42	34.88				

Station 4926; June 14; latitude 42°39' N., longitude 49°07' W.; depth 2,377 meters; dynamic height 970.939

0	9.71	33.29	0	9.71	33.29	25.68
25	5.17	33.38	25	5.17	33.38	26.39
50	2.61	33.83	50	2.61	33.83	27.00
75	1.99	34.06	75	1.99	34.06	27.24
100	3.06	34.30	100	3.06	34.30	27.34
150	2.62	34.44	150	2.62	34.44	27.49
201	3.19	34.62	200	3.20	34.62	27.59
301	3.95	34.82	300	3.95	34.82	27.67
399	3.81	34.85	400	3.85	34.85	27.70
600	4.00	34.94	600	4.00	34.94	27.76
804	3.76	34.93	800	3.75	34.93	27.77
1,011	3.61	34.92	1,000	3.60	34.92	27.79
1,533	3.44	34.92				

Station 4927; June 14; latitude 42°20.5' N., longitude 48°31' W.; depth 3,292 meters; dynamic height 971.007

0	10.38	33.03	0	10.38	33.03	25.37
25	4.18	33.24	25	4.18	33.24	26.39
50	0.43	33.23	50	0.43	33.23	26.68
75	-0.23	33.47	75	-0.23	33.47	26.91
100	0.55	33.77	100	0.55	33.77	27.11
150	3.06	34.25	150	3.06	34.25	27.30
199	2.31	34.33	200	2.30	34.33	27.43
299	3.86	34.69	300	3.85	34.70	27.58
401	4.83	34.94	400	4.85	34.94	27.66
605	3.96		600	3.95	34.93	27.75
810	3.87	34.93	800	3.85	34.93	27.76
1,012	3.55	34.88	1,000	3.55	34.89	27.76
1,516	3.29	34.88				

Station 4928; June 14; latitude 41°56.5' N., longitude 47°50' W.; depth 3,704 meters; dynamic height 971.106

0	13.95	33.64	0	13.95	33.64	25.17
24	10.58	34.18	25	10.60	34.25	26.28
47	13.42	35.50	50	13.40	35.50	26.72
71	13.00	35.53	75	12.90	35.53	26.84
95		35.53	100	12.55	35.52	26.90
142		35.08	150	9.90	35.09	27.06
189		35.17	200	9.35	35.13	27.18
284	5.46	34.68	300	5.50	34.71	27.41
400	5.87	34.98	400	5.85	34.98	27.71
599	4.60	34.95	600	4.60	34.95	27.70
797	4.17	34.93	800	4.15	34.93	27.73
998	3.93	34.93	1,000	3.90	34.93	27.76
1,499	3.52	34.91				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4929; June 14; latitude 41°36' N., longitude 47°17' W.; depth 4,150 meters; dynamic height 971.128						
0	13.31	33.27	0	13.31	33.27	25.01
25	9.40	33.43	25	9.40	33.43	25.84
49	8.89	34.19	50	8.90	34.22	26.55
74	9.11	34.61	75	9.10	34.63	26.83
99	10.16	35.02	100	10.15	35.02	26.96
148	8.80	34.95	150	8.75	34.95	27.14
197	7.30	34.78	200	7.20	34.78	27.23
296	5.96	34.74	300	6.00	34.74	27.37
402	6.05	34.92	400	6.05	34.92	27.51
601	4.99	34.97	600	5.00	34.97	27.68
798	4.47	34.98	800	4.45	34.98	27.74
998	4.17	34.97	1,000	4.15	34.97	27.77
1,499	3.55	34.93				

Station 4930; June 15; latitude 41°00' N., longitude 48°30' W.; depth 2,926 meters; dynamic height 971.212

0	16.71	35.08	0	16.71	35.08	25.66
24	15.11	35.63	25	15.10	35.63	26.46
47	14.74	35.62	50	14.65	35.62	26.54
71	14.15	35.59	75	14.05	35.56	26.63
94	13.45	35.48	100	13.35	35.48	26.71
142	12.84	35.51	150	12.80	35.52	26.86
189	12.61	35.54	200	12.35	35.51	26.94
283	9.78	35.20	300	9.45	35.16	27.19
418	7.50	35.01	400	7.70	35.02	27.36
624	5.58	35.05	600	5.75	35.05	27.64
828	4.51	34.98	800	4.60	34.99	27.73
1,033	3.98	34.92	1,000	4.00	34.93	27.75
1,544	3.74	34.93				

Station 4931; June 15; latitude 41°32' N., longitude 48°56' W.; depth 3,054 meters; dynamic height 971.237

0	17.89	35.55	0	17.89	35.55	25.74
25	16.20	35.74	25	16.20	35.74	26.29
49	15.78	35.78	50	15.78	35.78	26.42
75	15.17	35.88	75	15.17	35.88	26.62
101	14.05	35.72	100	14.05	35.72	26.75
150	12.95	35.52	150	12.95	35.52	26.82
201	13.01	35.58	200	13.00	35.58	26.86
302	10.67	35.35	300	10.75	35.35	27.11
401	8.54	35.12	400	8.55	35.12	27.30
600	5.38	34.97	600	5.35	34.97	27.63
799	4.67	35.00	800	4.65	35.00	27.74
1,000	3.99	34.93	1,000	4.00	34.93	27.75
1,502	3.81	34.95				

Station 4932; June 15; latitude 42°00' N., longitude 49°27' W.; depth 3,292 meters; dynamic height 971.107

0	11.77	33.31	0	11.77	33.31	25.35
25	7.44	33.42	25	7.44	33.42	26.14
49	4.87	33.56	50	4.90	33.62	26.62
74	9.04	34.52	75	9.10	34.54	26.76
98	11.12	35.18	100	11.10	35.18	26.92
148	4.03	34.14	150	4.10	34.14	27.11
197	6.96	34.72	200	6.95	34.72	27.23
295	5.30	34.64	300	5.40	34.64	27.36
380	6.48	35.02	400	6.25	35.00	27.54
569	3.69	34.79	600	3.65	34.80	27.68
758	3.61	34.86	800	3.65	34.87	27.74
950	3.72	34.91	1,000	3.70	34.91	27.77
1,432	3.50	34.90				

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4933; June 15; latitude 41°01.5' N., longitude 50°17' W.; depth 4,200 meters; dynamic height 971.286						
0	19.20	35.60	0	19.20	35.60	25.44
24	17.02	35.52	25	17.00	35.52	25.92
49	15.47	35.65	50	15.90	35.65	26.29
73	13.75	35.37	75	13.75	35.37	26.55
98	14.46	35.73	100	14.45	35.73	26.67
147	13.23	35.57	150	13.20	35.56	26.80
195	12.89	35.55	200	12.85	35.55	26.87
293	11.56	35.52	300	11.40	35.50	27.11
414	8.58	35.10	400	8.85	35.13	27.26
621	5.88	35.02	600	6.10	35.03	27.58
830	4.64	34.98	800	4.70	34.98	27.71
1,037	4.29	34.98	1,000	4.30	34.98	27.75
1,555	3.70	34.94				

Station 4934; June 15-16; latitude 41°30' N., longitude 50°17' W.; depth 3,932 meters; dynamic height 971.333

0	19.13	35.90	0	19.13	35.90	25.69
24	18.46	36.15	25	18.45	36.15	26.05
49	18.02	36.20	50	18.00	36.20	26.21
73	17.40	36.29	75	17.35	36.29	26.44
98	17.16	36.27	100	17.10	36.27	26.48
147	14.72	35.77	150	14.65	35.76	26.65
195	13.83	35.72	200	13.75	35.71	26.81
293	12.14	35.51	300	12.05	35.49	26.98
393	9.80	35.24	400	9.65	35.22	27.20
587	6.43	35.04	600	6.30	35.04	27.56
779	5.03	35.00	800	4.95	35.00	27.70
976	4.42	34.97	1,000	4.35	34.97	27.75
1,470	3.88	34.96				

Station 4935; June 16; latitude 42°03.5' N., longitude 50°25' W.; depth 3,292 meters; dynamic height 971.097

0	10.88	32.95	0	10.88	32.95	25.22
25	6.62	33.06	25	6.62	33.06	25.96
49	4.01	33.29	50	3.90	33.29	26.45
74	1.25	33.44	75	1.25	33.45	26.80
99	4.02	34.00	100	4.10	34.01	27.01
148	5.25	34.38	150	5.25	34.39	27.18
197	5.31	34.50	200	5.30	34.50	27.26
296	4.74	34.63	300	4.80	34.64	27.43
417	5.29	34.91	400	5.25	34.89	27.58
622	4.75	34.97	600	4.80	34.97	27.70
825	4.32	34.96	800	4.35	34.96	27.74
1,031	4.15	34.96	1,000	4.15	34.96	27.76
1,545	3.54	34.90				

Station 4936; June 16; latitude 42°24.5' N., longitude 50°27' W.; depth 2,350 meters; dynamic height 971.019

0	7.87	32.73	0	7.87	32.73	25.54
25	5.41	33.22	25	5.41	33.22	26.24
51	-0.37	33.53	50	-0.35	33.53	26.95
75	2.22	33.88	75	2.25	33.88	27.07
101	3.00	34.06	100	3.00	34.06	27.16
151	2.47	34.12	150	2.45	34.12	27.25
202	3.85	34.47	200	3.85	34.47	27.40
303	2.72	34.50	300	2.75	34.50	27.53
404	4.15	34.83	400	4.15	34.83	27.65
605	3.62	34.84	600	3.60	34.84	27.72
807	3.62	34.84	800	3.60	34.84	27.72
1,009	3.60	34.89	1,000	3.60	34.89	27.76
1,513	3.47	34.90				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	
Station 4937; June 16; latitude 42°42' N., longitude 50°25' W.; depth 1,143 meters; dynamic height 971.064						
0	8.04	32.74	0	8.04	32.74	25.52
21	6.35	32.88	25	5.60	32.92	25.98
42	2.25	33.16	50	2.00	33.24	26.59
66	1.54	33.43	75	0.85	33.44	26.82
84	0.52	33.45	100	0.40	33.52	26.92
126	0.52	33.65	150	1.05	33.78	27.08
167	1.45	33.87	200	1.65	34.01	27.23
251	1.94	34.23	300	2.60	34.45	27.50
353	3.24	34.68	400	3.60	34.77	27.67
542	3.90	34.85	600	3.80	34.85	27.71
739	3.58	34.85	800	3.60	34.86	27.74
887	3.57	34.88	(1,000)	3.55	34.89	27.76
Station 4938; June 16; latitude 42°48.5' N., longitude 50°26' W., depth 276 meters; dynamic height 971.044						
0	9.26	32.98	0	9.26	32.98	25.52
24	3.36	33.19	25	3.25	33.19	26.44
49	0.33	33.29	50	0.30	33.29	26.73
73	-0.05	33.38	75	-0.05	33.39	26.83
98	0.02	33.52	100	0.05	33.53	26.94
146	1.08	33.78	150	1.15	33.81	27.10
195	1.63	33.99	200	1.70	34.02	27.23
244	2.66	34.32				
Station 4939; June 16; latitude 42°55.5' N., longitude 50°24' W.; depth 102 meters; dynamic height 971.047						
0	8.75	32.95	0	8.75	32.95	25.58
25	4.31	33.15	25	4.31	33.15	26.30
50	1.87	33.23	50	1.87	33.23	26.59
75	1.39	33.39	75	1.39	33.39	26.75
Station 4940; June 16; latitude 43°18.5' N., longitude 50°25' W.; depth 70 meters; dynamic height 971.072						
0	8.36	32.16	0	8.36	32.16	25.02
25	3.55	32.65	25	3.55	32.65	25.98
49	2.70	32.90	50	2.65	32.91	26.27
Station 4941; July 12-13; latitude 50°00.5' N., longitude 48°59' W.; depth 1,920 meters; dynamic height 970.844						
0	8.32	32.72	0	8.32	32.72	25.46
24	3.37	34.46	25	3.30	34.49	27.47
48	2.93	34.64	50	2.95	34.65	27.63
72	2.96	34.70	75	2.95	34.70	27.67
96	3.02	34.71	100	3.05	34.71	27.67
144	3.16	34.78	150	3.15	34.78	27.71
191	3.23	34.81	200	3.25	34.82	27.74
287	3.39	34.84	300	3.35	34.84	27.74
342	3.30	34.84	400	3.30	34.84	27.75
517	3.28	34.84	600	3.30	34.84	27.75
694	3.26	34.85	800	3.25	34.85	27.76
877	3.26	34.85	1,000	3.25	34.86	27.77
1,348	3.31	34.88				
Station 4942; July 13; latitude 49°50' N., longitude 49°32' W.; depth 1,371 meters; dynamic height 970.863						
0	7.52	32.15	0	7.52	32.15	25.13
24	2.16	34.18	25	2.15	34.21	27.35
49	2.07	34.42	50	2.10	34.43	27.52
73	2.70	34.56	75	2.70	34.57	27.59
98	2.81	34.64	100	2.80	34.65	27.64
147	2.98	34.72	150	3.00	34.72	27.69
195	3.08	34.75	200	3.10	34.75	27.70
293	3.24	34.80	300	3.25	34.80	27.72
373	3.31	34.81	400	3.30	34.82	27.74
559	3.30	34.85	600	3.30	34.85	27.76
746	3.30	34.86	800	3.30	34.85	27.76
936	3.28	34.85	1,000	3.30	34.85	27.76
1,226	3.26	34.86				
Station 4943; July 13; latitude 49°38.5' N., longitude 50°01' W.; depth 626 meters; dynamic height 970.981						
0	9.46	32.24	0	9.46	32.24	24.91
24	1.04	33.03	25	0.95	33.04	26.50
47	-1.17	33.25	50	-1.15	33.28	26.78
71	-0.99	33.48	75	-0.90	33.51	26.97
94	-0.52	33.68	100	-0.40	33.73	27.12
141	0.71	34.08	150	0.95	34.13	27.46
188	1.76	34.34	200	1.90	34.38	27.50
282	2.54	34.59	300	2.65	34.62	27.64
397	3.05	34.74	400	3.10	34.74	27.69
			(600)	3.30	34.81	27.73
Station 4944; July 13; latitude 49°27' N., longitude 50°32' W.; depth 329 meters; dynamic height 971.040						
0	9.55	32.37	0	9.55	32.37	25.00
23	2.66	32.79	25	2.15	32.84	26.26
46	-1.06	33.18	50	-1.05	33.20	26.72
91	-0.85	33.09	75	-0.95	33.30	26.79
137	-0.76	33.55	100	-0.85	33.37	26.84
183	0.40	33.86	150	-0.50	33.63	27.04
274	0.65	34.30	200	0.50	33.95	27.25
			(300)	0.85	34.42	27.61
Station 4945; July 13; latitude 49°18.5' N., longitude 51°03' W.; depth 334 meters; dynamic height 971.034						
0	10.40	32.27	0	10.40	32.27	24.78
25	0.67	32.94	25	0.67	32.94	26.43
50	-0.95	33.13	50	-0.95	33.13	26.66
75	-1.04	33.32	75	-1.04	33.32	26.81
100	-1.12	33.46	100	-1.12	33.46	26.93
150	-0.35	33.70	150	-0.35	33.70	27.09
200	0.82	34.02	200	0.82	34.02	27.29
300	2.48	34.54	300	2.48	34.54	27.58

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	

Station 4946; July 13; latitude 49°09.5' N., longitude 51°34' W.; depth 315 meters; dynamic height 971.080

0	10.28	31.84	0	10.28	31.84	24.46
24		32.77	25	0.75	32.79	26.31
49	-1.06	33.03	50	-1.05	33.04	26.59
73	-1.17	33.14	75	-1.20	33.15	26.68
97	-1.22	33.22	100	-1.20	33.23	26.74
146	-1.25	33.38	150	-1.25	33.40	26.89
194	-0.72	33.63	200	-0.60	33.67	27.08
291	1.72		(300)	1.95	34.38	27.50

Station 4947; July 13; latitude 49°04' N., longitude 51°55' W.; depth 302 meters; dynamic height 971.081

0	11.52	31.32	0	11.52	31.32	23.84
24	-0.07	32.70	25	-0.15	32.75	26.32
48	-0.75	32.99	50	-0.80	33.00	26.55
71	-1.40	33.12	75	-1.40	33.13	26.67
95	-1.41	33.21	100	-1.40	33.23	26.75
143	-1.22	33.41	150	-1.15	33.45	26.93
191	-0.50	33.71	200	-0.30	33.77	27.15
286	2.10	34.37	(300)	2.50	34.47	27.53

Station 4948; July 13; latitude 49°00.5' N., longitude 52°08' W.; depth 293 meters; dynamic height 971.082

0	12.03	30.52	0	12.03	30.52	23.13
20	-1.24	32.77	25	-1.40	32.85	26.44
41	-1.56	32.99	50	-1.60	33.05	26.61
61	-1.62	33.12	75	-1.60	33.17	26.71
82	-1.54	33.20	100	-1.30	33.32	26.82
123	-1.08	33.47	150	-0.90	33.53	26.98
164	-0.84	33.57	200	-0.20	33.74	27.12
221	0.31	33.88				

Station 4949; July 13; latitude 48°54.5' N., longitude 52°26' W.; depth 352 meters; dynamic height 971.115

0	11.32	30.71	0	11.32	30.71	23.41
22	-0.21	32.62	25	-0.30	32.68	26.27
45	-0.63	32.88	50	-0.70	32.92	26.48
67	-1.07	33.05	75	-1.15	33.09	26.63
89	-1.28	33.14	100	-1.35	33.18	26.71
134	-1.48	33.27	150	-1.45	33.31	26.81
178	-1.28	33.40	200	-1.00	33.52	26.98
267	0.74	34.00	(300)	1.85	34.24	27.39

Station 4950; July 13-14; latitude 48°48' N., longitude 52°43' W.; depth 235 meters; dynamic height 971.138

0	11.25	30.13	0	11.25	30.13	22.98
24	-0.48	32.75	25	-0.60	32.77	26.35
48	-1.36	32.98	50	-1.40	32.99	26.56
71	-1.59	33.06	75	-1.60	33.07	26.68
95	-1.63	33.13	100	-1.65	33.14	26.68
143	-1.56	33.19	150	-1.55	33.20	26.73
190	-1.27	33.28	(200)	-1.20	33.30	26.80

Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	

Station 4951; July 14; latitude 48°46.5' N., longitude 52°49' W.; depth 165 meters; dynamic height 971.148

0	11.60	29.82	0	11.60	29.82	22.67
24	-0.34	32.65	25	-0.40	32.62	26.23
48	-1.21	32.96	50	-1.25	32.97	26.54
72	-1.47	33.04	75	-1.50	33.05	26.60
96	-1.62	33.11	100	-1.65	33.11	26.66
139	-1.59	33.14	(150)	-1.60	33.15	26.69

Station 4952; July 14; latitude 48°44' N., longitude 52°58' W.; depth 96 meters; dynamic height 971.164

0	13.06	29.96	0	13.06	29.96	22.51
25	0.76	32.48	25	0.76	32.48	26.06
51	-1.24	32.77	50	-1.20	32.76	26.37
76	-1.39	32.90	75	-1.40	32.90	26.48

Station 4953; July 14; latitude 48°38.5' N., longitude 52°45' W.; depth 169 meters; dynamic height 971.155

0	12.56	30.29	0	12.56	30.29	22.86
24	0.82	32.48	25	0.50	32.50	26.08
47	-1.18	32.82	50	-1.20	32.84	26.43
71	-1.36	32.96	75	-1.40	32.98	26.55
94	-1.47	33.04	100	-1.50	33.05	26.60
141	-1.61	33.10	(150)	-1.65	33.11	26.66

Station 4954; July 14; latitude 48°33.5' N., longitude 52°35' W.; depth 269 meters; dynamic height 971.137

0	11.01	30.10	0	11.01	30.10	22.99
25	-0.88	32.72	25	-0.88	32.72	26.32
49	-1.29	32.95	50	-1.30	32.96	26.53
74	-1.55	33.04	75	-1.55	33.04	26.60
98	-1.60	33.11	100	-1.60	33.11	26.66
147	-1.52	33.18	150	-1.50	33.18	26.71
196	-1.50	33.25	200	-1.45	33.26	26.77
245	-0.36	33.47				

Station 4955; July 14; latitude 48°20.5' N., longitude 52°09' W.; depth 183 meters; dynamic height 971.116

0	10.85	31.22	0	10.85	31.22	23.88
25	0.00	32.64	25	0.00	32.64	26.23
49	-1.01	32.98	50	-1.05	32.99	26.55
			(75)	-1.35	33.10	26.64
			(100)	-1.40	33.17	26.70
			(150)	-1.20	33.31	26.81

Station 4956; July 14; latitude 48°13.5' N., longitude 51°55' W.; depth 187 meters; dynamic height 971.105

0	11.47	31.56	0	11.47	31.56	24.04
25	-0.19	32.72	25	-0.19	32.72	26.30
50	-1.19	33.03	50	-1.19	33.03	26.58
75	-1.51	33.14	75	-1.51	33.14	26.68
101	-1.54	33.22	100	-1.55	33.22	26.75
151	-1.17	33.41	150	-1.15	33.40	26.89

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Sealed values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4957; July 14; latitude 48°06' N., longitude 51°40' W.; depth 210 meters; dynamic height 971.103						
0	11.30	31.94	0	11.30	31.94	24.36
25	2.05	32.56	25	2.05	32.56	26.04
49	-0.92	33.01	50	-0.95	33.02	26.57
74	-1.23	33.16	75	-1.25	33.16	26.69
99	-1.39	33.28	100	-1.40	33.29	26.79
148	-0.66	33.50	150	-0.65	33.50	26.95
183	-0.25	33.59	(200)	-0.10	33.60	27.00

Station 4958; July 14; latitude 47°58' N., longitude 51°21' W.; depth 160 meters; dynamic height 971.098

0	11.48	31.98	0	11.48	31.98	24.36
25	2.00	32.63	25	2.00	32.63	26.10
49	-0.92	33.04	50	-0.95	33.05	26.59
74	-1.21	33.16	75	-1.25	33.17	26.70
99	-1.28	33.29	100	-1.30	33.30	26.80
148	-0.07	33.61	150	0.00	33.63	27.02

Station 4959; July 14; latitude 47°50.5' N., longitude 51°03' W.; depth 115 meters; dynamic height 971.097

0	11.20	32.05	0	11.20	32.05	24.47
25	0.96	32.58	25	0.96	32.58	26.13
49	-1.03	32.98	50	-1.05	32.99	26.55
74	-0.96	33.18	75	-0.95	33.19	26.71
			(100)	0.10	33.35	26.80

Station 4960; July 14; latitude 47°41.5' N., longitude 50°41' W.; depth 134 meters; dynamic height 971.133

0	11.65	32.03	0	11.65	32.03	24.38
25	8.26	32.08	25	8.26	32.08	24.96
51	-0.39	32.76	50	0.00	32.75	26.32
76	-0.85	33.13	75	-0.85	33.13	26.65
102	-0.54	33.38	100	-0.55	33.36	26.82

Station 4961; July 14; latitude 47°35' N., longitude 50°25' W.; depth 201 meters; dynamic height 971.117

0	12.16	32.04	0	12.16	32.04	24.28
25	2.97	32.40	25	2.97	32.40	25.84
51	-0.45	32.81	50	-0.40	32.80	26.38
76	-0.87	32.98	75	-0.85	32.97	26.52
101	-0.53	33.33	100	-0.55	33.32	26.79
152	-0.62	33.44	150	-0.60	33.44	26.89

Station 4962; July 14; latitude 47°23' N., longitude 49°58' W.; depth 88 meters; dynamic height 971.135

0	11.91	32.34	0	11.91	32.34	24.56
26	8.17	32.46	25	8.30	32.46	25.25
52	1.17	32.75	50	1.80	32.73	26.19
78	-0.32	33.00	75	-0.20	32.98	26.51

Observed values			Sealed values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4963; July 15; latitude 47°47' N., longitude 49°48' W.; depth 115 meters; dynamic height 971.113						
0	12.01	(0)	0	12.01 (32.15)		24.40
26	5.95	(25)	25	6.20 (32.83)		25.84
52	-0.35	(50)	50	0.25 (32.88)		26.38
78	-0.73	(75)	75	-0.70 (33.10)		26.62
104	-0.62	(100)	100	-0.65 (33.19)		26.70

Station 4964; July 15; latitude 47°59.5' N., longitude 49°43' W.; depth 170 meters; dynamic height 971.085

0	11.61	31.87	0	11.61	31.87	24.26
25	-0.29	32.91	25	-0.29	32.91	26.45
51	-0.98	33.05	50	-1.00	33.05	26.59
76	-1.19	33.22	75	-1.20	33.22	26.74
102	-1.44	33.28	100	-1.40	33.28	26.79
153	-0.27	33.69	150	-0.35	33.66	27.06

Station 4965; July 15; latitude 48°10.5' N., longitude 49°39' W.; depth 218 meters; dynamic height 971.095

0	11.19	31.77	0	11.19	31.77	24.26
25	-0.10	32.77	25	-0.10	32.77	26.33
50	-1.27	33.06	50	-1.27	33.06	26.61
76	-1.50	33.18	75	-1.50	33.18	26.71
101	-1.54	33.26	100	-1.55	33.26	26.78
152	-0.99	33.47	150	-1.00	33.46	26.93
202	-0.32	33.69	200	-0.35	33.68	27.07

Station 4966; July 15; latitude 48°31.5' N., longitude 49°29' W.; depth 714 meters; dynamic height 970.996

0	11.55	32.11	0	11.55	32.11	24.45
25	1.00	32.95	25	1.00	32.95	26.42
50	1.10	33.33	50	1.10	33.33	26.71
75	-0.76	33.59	75	-0.76	33.59	27.02
100	-0.18	33.79	100	-0.18	33.79	27.16
150	1.42	34.17	150	1.42	34.17	27.38
201	1.92	34.36	200	1.90	34.36	27.49
301	2.62	34.61	300	2.60	34.61	27.63
396	2.79	34.67	400	2.80	34.67	27.66
594	3.32	34.83	600	3.35	34.83	27.73

Station 4967; July 15; latitude 48°39' N., longitude 49°25' W.; depth 1,262 meters; dynamic height 970.933

0	10.04	32.31	0	10.04	32.31	24.87
25	1.17	33.20	25	1.17	33.20	26.62
50	-0.56	33.64	50	-0.56	33.64	27.05
75	-0.08	33.86	75	-0.08	33.86	27.20
100	0.97	34.09	100	0.97	34.09	27.33
150	2.02	34.41	150	2.02	34.41	27.52
201	2.56	34.58	200	2.55	34.58	27.61
301	3.15	34.77	300	3.15	34.77	27.71
363	*3.55	34.81	400	3.55	34.83	27.71
554	3.43	34.86	600	3.45	34.87	27.76
752	3.49	34.87	800	3.45	34.87	27.76
956	3.26	34.86	1,000	3.25	34.86	27.77
1,113	3.28	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4968; July 15; latitude 49°04.5' N., longitude 49°16' W.; depth 1,628 meters; dynamic height 970.847

0	9.17	31.83	0	9.17	31.83	24.64
25	2.88	34.43	25	2.88	34.43	27.46
50	2.62	34.56	50	2.62	34.56	27.59
75	2.71	34.63	75	2.71	34.63	27.63
101	2.87	34.69	100	2.85	34.69	27.67
151	3.23	34.78	150	3.25	34.78	27.70
201	3.31	34.82	200	3.30	34.82	27.74
302	3.31	34.84	300	3.30	34.84	27.75
391	3.27	34.86	400	3.30	34.86	27.77
587	3.28	34.86	600	3.30	34.86	27.77
782	3.29	34.86	800	3.30	34.86	27.77
980	3.23	34.86	1,000	3.25	34.86	27.77
1,478	3.31	34.89				

Station 4969; July 15; latitude 49°30.5' N., longitude 49°10' W.; depth 1,628 meters; dynamic height 970.835

0	8.71	32.31	0	8.71	32.31	25.08
25	3.03	34.48	25	3.03	34.48	27.48
51	2.80	34.63	50	2.80	34.63	27.62
76	2.91	34.69	75	2.90	34.68	27.66
102	3.04	34.75	100	3.05	34.74	27.69
152	3.10	34.79	150	3.10	34.79	27.73
203	3.19	34.83	200	3.20	34.83	27.75
305	3.26	34.84	300	3.25	34.85	27.76
401	3.26	34.86	400	3.25	34.86	27.77
609	3.26	34.86	600	3.25	34.86	27.77
800	3.23	34.86	800	3.25	34.86	27.77
1,497	3.32	34.87	1,000	3.20	34.86	27.78

Station 4970; July 15; latitude 50°00' N., longitude 49°00' W.; depth 1,847 meters; dynamic height 970.838

0	10.59	32.77	0	10.59	32.77	25.13
25	3.45	34.51	25	3.45	34.51	27.47
50	2.97	34.65	50	2.97	34.65	27.63
76	3.08	34.71	75	3.10	34.71	27.67
101	3.15	34.77	100	3.15	34.77	27.70
151	3.25	34.80	150	3.25	34.80	27.72
202	3.23	34.81	200	3.25	34.81	27.73
303	3.28	34.85	300	3.30	34.85	27.76
403	3.29	34.85	400	3.30	34.85	27.76
604	3.30	34.86	600	3.30	34.86	27.77
803	3.26	34.86	800	3.30	34.86	27.77
1,004	3.24	34.85	1,000	3.25	34.86	27.77
1,508	3.33	34.89				

Station 4971; July 17; latitude 53°43' N., longitude 55°48' W.; depth 110 meters; dynamic height 1454.920

0	7.49	27.90	0	7.49	27.90	21.80
25	-0.23	32.02	25	-0.23	32.02	25.74
49	-1.61	32.72	50	-1.60	32.72	26.35
74	-1.68	32.78	75	-1.70	32.78	26.39
98	-1.67	32.82	100	-1.65	32.82	26.43

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4972; July 17; latitude 53°52' N., longitude 55°32' W.; depth 215 meters; dynamic height 1454.841

0	7.18	31.22	0	7.18	31.22	24.44
23	-0.54	32.56	25	-0.75	32.59	26.22
47	-1.51	32.84	50	-1.55	32.86	26.46
70	-1.49	32.96	75	-1.45	32.97	26.54
93	-1.37	33.02	100	-1.35	33.05	26.60
140	-1.25	33.37	150	-1.00	33.52	26.98
177	0.04	33.92	(200)	1.05	34.26	27.47

Station 4973; July 17; latitude 53°55.5' N., longitude 55°26' W.; depth 170 meters; dynamic height 1454.807

0	7.31	31.57	0	7.31	31.57	24.70
25	-0.28	32.66	25	-0.28	32.66	26.25
49	-1.37	32.97	50	-1.40	32.98	26.55
74	-1.30	33.20	75	-1.30	33.21	26.73
98	-1.22	33.40	100	-1.20	33.41	26.90
147	-0.60	33.78	150	-0.55	33.81	27.19

Station 4974; July 17; latitude 54°05.5' N., longitude 55°07' W.; depth 165 meters; dynamic height 1454.795

0	7.47	31.44	0	7.47	31.44	24.58
25	-0.55	32.77	25	-0.55	32.77	26.35
51	-1.29	33.26	50	-1.30	33.25	26.76
76	-1.26	33.42	75	-1.25	33.42	26.91
101	-1.18	33.58	100	-1.20	33.57	27.03
147	-0.75	33.72	150	-0.70	33.73	27.13

Station 4975; July 17; latitude 54°11' N., longitude 54°55' W.; depth 170 meters; dynamic height 1454.790

0	7.80	31.52	0	7.80	31.52	24.60
25	-1.21	32.87	25	-1.21	32.87	26.46
50	-1.38	33.11	50	-1.38	33.11	26.65
75	-1.22	33.35	75	-1.22	33.35	26.84
101	-1.00	33.60	100	-1.00	33.59	27.03
151	0.09	34.00	150	0.10	33.99	27.30

Station 4976; July 17; latitude 54°30.5' N., longitude 54°22' W.; depth 224 meters; dynamic height 1454.812

0	6.90	31.38	0	6.90	31.38	24.61
25	-1.46	32.89	25	-1.46	32.89	26.47
50	-1.35	33.11	50	-1.35	33.11	26.65
76	-1.29	33.26	75	-1.30	33.25	26.76
101	-1.27	33.40	100	-1.25	33.39	26.88
151	-1.00	33.67	150	-1.00	33.66	27.09
202	-0.21	33.95	200	-0.20	33.94	27.28

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰		Depth, meters	Temperature, °C	Salinity, ‰	σ_t	Depth, meters	Temperature, °C	Salinity, ‰		Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4977; July 17; latitude 54°45' N., longitude 53°51' W.; depth 320 meters; dynamic height 1454.720								Station 4981; July 17-18; latitude 55°10.5' N., longitude 52°51' W.; depth 2,871 meters; dynamic height 1454.582							
0.....	4.72	32.48		0.....	4.72	32.48	25.73	0.....	8.61	34.33		0.....	8.61	34.33	26.67
23.....	2.36	33.38		25.....	2.35	33.47	26.75	25.....	7.72	34.41		25.....	7.72	34.41	26.88
45.....	2.50	33.90		50.....	2.45	33.94	27.10	50.....	3.48	34.64		50.....	3.48	34.64	27.57
68.....	1.91	34.06		75.....	1.45	34.07	27.29	75.....	3.10	34.75		75.....	3.10	34.75	27.70
90.....	0.73	34.08		100.....	0.85	34.14	27.38	100.....	3.09	34.755		100.....	3.10	34.76	27.71
135.....	1.49	34.31		150.....	1.60	34.33	27.48	150.....	3.29	34.85		150.....	3.30	34.85	27.76
180.....	1.74	34.36		200.....	1.85	34.38	27.50	200.....	3.34	34.87		200.....	3.35	34.87	27.77
270.....	2.14	34.46		(300).....	2.25	34.49	27.56	270.....	3.38	34.88		300.....	3.40	34.88	27.77
Station 4978; July 17; latitude 54°51' N., longitude 53°34' W.; depth 619 meters; dynamic height 1454.643								Station 4982; July 18; latitude 55°30' N., longitude 52°19' W.; depth 3,200 meters; dynamic height 1,454.577							
0.....	7.01	33.26		0.....	7.01	33.26	26.07	0.....	8.87	34.34		0.....	8.87	34.34	26.64
18.....	2.27	34.01		25.....	1.35	34.07	27.30	25.....	5.16	34.50		25.....	5.16	34.50	27.28
37.....	0.59	34.14		50.....	0.90	34.19	27.42	49.....	3.08	34.68		50.....	3.10	34.68	27.64
55.....	1.02	34.22		75.....	1.65	34.37	27.52	74.....	3.05	34.75		75.....	3.05	34.75	27.70
74.....	1.62	34.36		100.....	2.25	34.49	27.56	98.....	3.03	34.77		100.....	3.05	34.77	27.72
111.....	2.46	34.53		150.....	2.85	34.63	27.62	147.....	3.19	34.83		150.....	3.20	34.83	27.75
147.....	2.84	34.62		200.....	3.10	34.74	27.69	197.....	3.25	34.85		200.....	3.25	34.85	27.76
221.....	3.12	34.78		300.....	3.15	34.80	27.73	295.....	3.30	34.865		300.....	3.30	34.865	27.77
342.....	3.17	34.80		400.....	3.20	34.81	27.74	394.....	3.28	34.87		400.....	3.30	34.87	27.78
533.....	3.36	34.85		(600).....	3.40	34.86	27.76	592.....	3.33	34.89		600.....	3.30	34.885	27.79
Station 4979; July 17; latitude 54°55' N., longitude 53°23' W.; depth 1,463 meters; dynamic height 1454.629								Station 4983; July 18; latitude 55°55.5' N., longitude 51°34' W.; depth 3,402 meters; dynamic height 1,454.650							
0.....	7.31	33.69		0.....	7.31	33.69	26.37	0.....	9.62	34.42		0.....	9.62	34.42	26.59
25.....	4.64	34.31		25.....	4.64	34.31	27.19	25.....	8.79	34.47		25.....	8.79	34.47	26.76
51.....	3.30	34.46		50.....	3.30	34.46	27.45	49.....	5.65	34.59		50.....	5.60	34.59	27.30
76.....	2.91	34.61		75.....	2.90	34.61	27.61	74.....	4.83	34.62		75.....	4.80	34.62	27.42
102.....	2.95	34.68		100.....	2.95	34.68	27.65	99.....	4.38	34.64		100.....	4.35	34.64	27.48
152.....	3.11	34.77		150.....	3.10	34.77	27.72	148.....	3.91	34.71		150.....	3.90	34.71	27.59
203.....	3.16	34.78		200.....	3.15	34.78	27.71	197.....	3.68	34.73		200.....	3.65	34.73	27.62
305.....	3.27	34.83		300.....	3.30	34.83	27.74	296.....	3.48	34.83		300.....	3.50	34.83	27.72
352.....	3.29	34.84		400.....	3.30	34.84	27.75	398.....	3.57	34.89		400.....	3.65	34.89	27.76
532.....	3.36	34.855		600.....	3.40	34.86	27.76	596.....	3.50	34.88		600.....	3.50	34.88	27.76
713.....	3.43	34.87		800.....	3.45	34.865	27.75	792.....	3.40	34.88		800.....	3.40	34.88	27.77
897.....	3.42	34.865		1,000.....	3.40	34.86	27.76	985.....	3.36	34.88		1,000.....	3.35	34.88	27.77
1,370.....	3.35	34.865						1,486.....	3.32	34.90		1,500.....	3.35	34.90	27.79
Station 4980; July 17; latitude 55°00' N., longitude 53°11' W.; depth 2,067 meters; dynamic height 1454.612								Station 4984; July 18; latitude 55°55.5' N., longitude 51°34' W.; depth 3,402 meters; dynamic height 1,454.650							
0.....	8.10	33.89		0.....	8.10	33.89	26.40	0.....	9.62	34.42		0.....	9.62	34.42	26.59
23.....	5.98	34.28		25.....	5.75	34.33	27.07	25.....	8.79	34.47		25.....	8.79	34.47	26.76
46.....	3.46	34.60		50.....	3.30	34.62	27.58	49.....	5.65	34.59		50.....	5.60	34.59	27.30
69.....	2.97	34.70		75.....	3.00	34.73	27.69	74.....	4.83	34.62		75.....	4.80	34.62	27.42
138.....	3.20	34.80		100.....	3.25	34.81	27.73	99.....	4.38	34.64		100.....	4.35	34.64	27.48
184.....	3.35	34.83		150.....	3.35	34.83	27.73	148.....	3.91	34.71		150.....	3.90	34.71	27.59
276.....	3.40	34.845		200.....	3.40	34.84	27.74	197.....	3.68	34.73		200.....	3.65	34.73	27.62
370.....	3.28	34.84		300.....	3.30	34.84	27.75	296.....	3.48	34.83		300.....	3.50	34.83	27.72
557.....	3.57	34.85		400.....	3.35	34.855	27.75	398.....	3.57	34.89		400.....	3.65	34.89	27.76
746.....	3.41	34.86		600.....	3.40	34.86	27.76	596.....	3.50	34.88		600.....	3.50	34.88	27.76
935.....	3.46	34.86		800.....	3.45	34.865	27.75	792.....	3.40	34.88		800.....	3.40	34.88	27.77
1,419.....	3.36	34.87		1,000.....	3.35	34.87	27.77	985.....	3.37	34.95		1,000.....	3.35	34.88	27.77
1,916.....	3.30	34.88		1,500.....	3.30	34.88	27.78	1,486.....	3.32	34.90		1,500.....	3.35	34.90	27.79
	3.21	34.90		(2,000).....	3.20	34.90	27.81	1,987.....	3.37	34.95		2,000.....	3.40	34.95	27.83
								2,335.....	3.12	34.91		2,500.....	3.05	34.93	27.84
								2,801.....	2.79	34.94		3,000.....	2.50	34.91	27.88
								3,126.....	2.31	34.91					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4984; July 18; latitude 56°30.5' N., longitude 50°25' W.; depth 3,530 meters; dynamic height 1,454.602

0	8.25	34.47	0	8.25	34.47	26.84
26	6.66	34.54	25	6.75	34.54	27.11
51	3.97	34.69	50	4.00	34.68	27.56
77	3.29	34.79	75	3.30	34.79	27.71
103	3.25	34.79	100	3.25	34.79	27.71
153	3.15	34.84	150	3.15	34.84	27.76
204	3.09	34.84	200	3.10	34.83	27.76
307	3.28	34.87	300	3.25	34.855	27.76
310	3.24	34.86	400	3.20	34.84	27.76
495	3.11	34.85	600	3.15	34.84	27.76
700	3.14	34.84	800	3.15	34.84	27.76
924	3.13	34.84	1,000	3.15	34.84	27.76
1,427	3.16	34.835	1,500	3.15	34.84	27.76
1,956	3.20	34.86	2,000	3.25	34.86	27.77
2,532	3.40	34.915	2,500	3.40	34.91	27.80
3,016	3.00	34.94	3,000	3.00	34.94	27.86
3,405	2.51	34.92	(3,500)	2.40	34.92	27.90

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t

Station 4987; July 19; latitude 58°05.5' N., longitude 47°01' W.; depth 3,054 meters; dynamic height 1454.603

0	7.66	34.49	0	7.66	34.49	26.94
25	6.43	34.52	25	6.43	34.52	27.14
50	5.44	34.63	50	5.44	34.63	27.34
75	3.40	34.76	75	3.40	34.76	27.68
100	3.60	34.82	100	3.60	34.82	27.71
150	3.58	34.845	150	3.58	34.845	27.73
199	3.59	34.845	200	3.60	34.845	27.73
299	3.84	34.90	300	3.85	34.90	27.74
406	3.37	34.85	400	3.40	34.85	27.75
609	3.46	34.87	600	3.45	34.87	27.76
812	3.44	34.89	800	3.45	34.89	27.77
1,015	3.43	34.895	1,000	3.45	34.895	27.78
1,494	3.37	34.915	1,500	3.40	34.91	27.80
2,044	3.23	34.915	2,000	3.25	34.91	27.81
2,490	2.77	34.92	2,500	2.75	34.92	27.87
2,986	1.67	34.87	(3,000)	1.60	34.87	27.92

Station 4985; July 19; latitude 57°02' N., longitude 49°02' W.; depth 3,475 meters; dynamic height 1,454.617

0	8.89	34.39	0	8.89	34.39	26.67
24	6.95	34.47	25	6.85	34.47	27.05
49	4.29	34.60	50	4.20	34.60	27.47
74	3.20	34.70	75	3.20	34.70	27.65
99	3.30	34.74	100	3.30	34.74	27.67
148	3.28	34.79	150	3.30	34.79	27.71
197	3.34	34.81	200	3.35	34.81	27.72
296	3.21	34.83	300	3.20	34.83	27.75
379	3.23	34.84	400	3.25	34.84	27.75
568	3.27	34.84	600	3.25	34.84	27.75
758	3.27	34.83	800	3.25	34.845	27.76
948	3.26	34.85	1,000	3.25	34.85	27.76
1,442	3.21	34.86	1,500	3.20	34.86	27.78
1,948	3.44	34.90	2,000	3.45	34.90	27.78
2,552	3.09	34.91	2,500	3.15	34.91	27.82
3,040	2.65	34.91	3,000	2.70	34.91	27.86
3,429	1.87	34.88				

Station 4988; July 20; latitude 58°37.5' N., longitude 45°57' W.; depth 2,505 meters; dynamic height 1454.604

0	6.80	34.49	0	6.80	34.49	27.06
25	5.22	34.55	25	5.22	34.55	27.32
51	4.43	34.67	50	4.45	34.67	27.50
76	3.77	34.85	75	3.75	34.85	27.71
101	3.76	34.86	100	3.75	34.86	27.72
152	4.10	34.92	150	4.10	34.92	27.74
203	3.92	34.905	200	3.95	34.91	27.74
304	3.71	34.885	300	3.70	34.89	27.75
376	3.59	34.895	400	3.55	34.885	27.76
565	3.49	34.885	600	3.50	34.875	27.76
755	3.45	34.85	800	3.45	34.87	27.76
946	3.42	34.84	1,000	3.45	34.87	27.76
1,431	3.39	34.87	1,500	3.35	34.87	27.77
1,926	3.00	34.895	2,000	2.90	34.895	27.84
2,448	2.08	34.84	(2,500)	1.95	34.83	27.86

Station 4989; July 20; latitude 59°00' N., longitude 45°16' W.; depth 2,286 meters; dynamic height 1454.582

0	6.99	34.64	0	6.99	34.64	27.15
25	5.60	34.64	25	5.60	34.64	27.34
49	4.98	34.79	50	4.95	34.79	27.53
74	4.62	34.855	75	4.60	34.89	27.65
98	4.35	34.93	100	4.35	34.93	27.71
147	4.20	34.95	150	4.20	34.95	27.75
196	4.08	34.94	200	4.05	34.94	27.75
294	3.72	34.88	300	3.70	34.885	27.75
393	3.83	34.92	400	3.80	34.92	27.77
591	3.66	34.915	600	3.65	34.91	27.77
789	3.53	34.90	800	3.55	34.90	27.77
988	3.47	34.90	1,000	3.50	34.90	27.78
1,492	3.29	34.91	1,500	3.30	34.91	27.81
2,002	2.80	34.92	2,000	2.80	34.92	27.86
2,253	2.14	34.875				

Station 4986; July 19; latitude 57°34.5' N., longitude 48°04' W.; depth 3,347 meters; dynamic height 1454.603

0	7.72	34.43	0	7.72	34.43	26.89
25	5.23	34.47	25	5.23	34.47	27.25
52	3.04	34.69	50	3.05	34.67	27.64
77	3.19	34.79	75	3.15	34.79	27.72
104	3.33	34.795	100	3.30	34.80	27.72
154	3.41	34.85	150	3.40	34.85	27.75
206	3.45	34.87	200	3.45	34.86	27.75
310	3.36	34.85	300	3.35	34.85	27.75
513	3.42	34.86	400	3.40	34.855	27.75
719	3.29	34.84	600	3.35	34.85	27.75
924	3.24	34.85	800	3.25	34.84	27.75
1,129	3.22	34.86	1,000	3.25	34.85	27.76
1,646	3.27	34.85	1,500	3.25	34.86	27.77
2,164	3.23	34.89	2,000	3.25	34.88	27.78
2,453	3.00	34.89	2,500	2.95	34.89	27.82
2,937	2.46	34.91	3,000	2.35	34.91	27.89
3,227	1.87	34.89				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1952—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C	Salinity, ‰	Depth, meters	Temperature, °C	Salinity, ‰	σ_t
Station 4990; July 20; latitude 59°14.5' N., longitude 44°54' W.; depth 1,957 meters; dynamic height 1454.616						
0	5.68	34.34	0	5.68	34.34	27.09
25	5.61	34.41	25	5.61	34.41	27.16
50	5.54	34.89	50	5.54	34.89	27.54
76	5.43	34.99	75	5.40	34.99	27.64
101	5.32	35.01	100	5.35	35.01	27.66
151	5.01	34.995	150	5.05	34.995	27.69
202	4.80	34.99	200	4.80	34.99	27.71
303	4.43	34.99	300	4.45	34.99	27.75
404	4.24	34.95	400	4.25	34.96	27.75
605	3.89	34.93	600	3.90	34.93	27.76
806	3.49	34.88	800	3.50	34.88	27.76
1,005	3.46	34.89	1,000	3.50	34.89	27.77
1,506	3.32	34.87	1,500	3.35	34.87	27.77
1,862	2.81	34.89				
Station 4991; July 20; latitude 59°21.5' N., longitude 44°41' W.; depth 1,097 meters; dynamic height 1454.676						
0	5.27	34.05	0	5.27	34.05	26.91
24	5.46	34.46	25	5.50	34.47	27.22
49	5.71	34.71	50	5.70	34.71	27.38
74	5.87	34.87	75	5.85	34.87	27.49
99	5.48	34.92	100	5.45	34.92	27.58
148	4.78	34.96	150	4.75	34.96	27.69
197	4.52	34.92	200	4.50	34.92	27.69
429	4.69	34.97	300	4.60	34.94	27.69
635	4.66	34.97	400	4.70	34.97	27.71
838	4.18	34.93	600	4.65	34.97	27.72
1,036	4.01	34.93	800	4.25	34.935	27.73
			1,000	4.05	34.93	27.74
Station 4992; July 20; latitude 59°31.5' N., longitude 44°31' W.; depth 179 meters; dynamic height 1454.811						
0	-0.18	30.99	0	-0.18	30.99	24.90
23	-0.36	31.27	25	-0.40	31.38	25.23
47	-0.93	32.55	50	-0.90	32.66	26.28
70	-0.81	33.37	75	-0.65	33.47	26.93
94	0.11	33.87	100	0.50	33.94	27.24
140	2.91	34.49	150	3.35	34.61	27.56
159	3.66	34.70				
Station 4993; July 20; latitude 59°34.5' N., longitude 44°23' W.; depth 153 meters; dynamic height 1454.839						
0	-0.20	31.22	0	-0.20	31.22	25.09
25	-0.53	31.61	25	-0.53	31.61	25.42
51	-0.84	32.84	50	-0.80	32.79	26.38
76	-1.01	33.12	75	-1.00	33.10	26.63
101	-0.97	33.56	100	-0.95	33.54	26.99
147	0.46	33.88	150	0.60	33.89	27.19
Station 4994; July 20; latitude 59°36' N., longitude 44°11' W.; depth 165 meters; dynamic height 1454.854						
0	-0.78	31.12	0	-0.78	31.12	25.03
25	-0.31	31.38	25	-0.31	31.38	25.22
51	-0.69	32.26	50	-0.70	32.23	25.92
76	-0.52	32.90	75	-0.55	32.87	26.43
101	-0.30	33.47	100	-0.30	33.44	26.88
152	1.70	34.25	150	1.60	34.21	27.39



Bull. U.S. Coast Guard

U. S. TREASURY DEPARTMENT - - - COAST GUARD

BULLETIN No. 39

INTERNATIONAL ICE OBSERVATION
AND ICE PATROL SERVICE IN THE
NORTH ATLANTIC OCEAN-[^{SEASON of}
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INTERNATIONAL
ICE OBSERVATION AND ICE PATROL
SERVICE

IN THE
NORTH ATLANTIC OCEAN



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Season of 1953

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A. C. RICHMOND,
Vice Admiral, U. S. Coast Guard
Commandant

Dist. (SDL No. 59)

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List 133

ABSTRACT

The authority for and the duties of the International Ice Patrol are described. The forces assigned to the International Ice Patrol during the 1953 ice season are listed.

A description of the aerial ice reconnaissance carried out by the International Ice Patrol during the 1953 ice season is presented.

The use of radio communications to gather reports of ice and weather conditions from ships and other sources and to disseminate ice information to shipping is described. The importance of the ice and weather reports from ships is emphasized.

Portrayal is made of ice conditions during 1953 in the vicinity of Newfoundland and the influence thereon of meteorological factors. The 1953 ice season in the North Atlantic was characterized for the third successive year by the small number of bergs which drifted south of 48° N. Although the southern and eastern limits reached by the pack ice were about normal to the third week in March, a marked recession of those limits then followed. The steamer routes in the Gulf of St. Lawrence and Strait of Belle Isle were opened unusually early. The lightness of the ice season may be attributed in part to the influence of certain meteorological conditions, namely, strong easterly winds which drove the pack ice and the bergs therein toward the coasts of Newfoundland and Labrador and into the bays and the absence of westerly winds of sufficient strength to drive the ice back into the Labrador Current before the ice melted.

Tables of ice reports made to the International Ice Patrol, ice reconnaissance flight statistics, number of bergs annually drifting south of 48° N., since 1913, opening dates for the Gulf of St. Lawrence and the Strait of Belle Isle (1946-53), and charts of sea surface isotherms and reported positions of ice are included.

In the section on oceanography the surface circulation in the Grand Banks region during the ice patrol season of 1953 has been discussed on the basis of four dynamic topographic surveys which indicated the presence of currents adequate to transport bergs to areas of potential hazard to the steamer lanes if bergs had entered the surveyed area from the north.

The circulation in the upper 1,000 meters in the Grand Banks region has been considered in greater detail by presentation of the volume and heat transports, mean temperature and minimum temperature observed in 1953 during 19 occupations of 10 selected sections

across the Labrador Current. These have been compared with seasonal normal values where such normals are available and the figures for the 1953 deficiency in volume and heat transport have been given.

The 12 occupations of the Bonavista triangle made during the past 6 years have been summarized as to volume of flow, mean temperature, minimum observed temperature, and heat transport for each of the 3 sides and approximate normal seasonal variation relationships developed for these functions and for the percentage of the volume transport following the eastern branch of the Labrador Current.

A new self-contained rapid response subsurface thermograph, which records temperature against depth down to 1,800 meters, has been described and the results of field tests have been discussed. Fourteen traces obtained before accidental destruction of the instrument have been shown with corresponding observations by reversing thermometers. The results indicate the presence of short period internal waves which are averaged out in the reversing thermometer-Nansen water bottle method.

The temperature-salinity characteristics of the Labrador Current water, mixed water and Atlantic Current water found in the Grand Banks region in 1953 have been compared with the 8-year mean for the period 1934-41. The year-to-year changes in the position of the T-S points for several levels in each of the 3 water masses were investigated for the 6 postwar years 1948-53 but any steady trend which may be present was masked by the large year-to-year excursions of the points. Some slight freshening in the deeper levels, compared to prewar observations, was noted.

Two more surveys in 1953 were added to the study of the relationship which is presumed to exist between the location of the northern boundary of Atlantic Current water in the Grand Banks region, the strength of the Labrador Current and the strength of the North Atlantic eddy as indicated by the difference in sea level between Bermuda and Charleston. As with all the postwar observations, the 1953 measurements gave a poor agreement with the relationship developed for the prewar observations.

The 1953 repetition of the section from South Wolf Island, Labrador, to Cape Farewell, Greenland, has been examined and the results presented. The abnormally vigorous circulation in the Labrador Sea which has characterized the last few years continued in 1953. The temperature minimum of the intermediate water was found to be warmer than during the period 1934-39. In this respect 1953 was like 1940-41 and all the postwar years except 1950. On the basis of the salinity maximum in the West Greenland Current the Irminger Current contribution to that current was judged to be negligibly small

in 1953. The temperature of this portion of the West Greenland Current, however, remained fairly warm, so that on the basis of heat transport and assumed constant mean temperatures of the contributory currents the Irminger Current contribution was about two-thirds of its normal volume transport.

From measurements made on samples collected in the Grand Banks region in 1952 and from the section across the Labrador Sea in 1952 and 1953 it is concluded that the concentration of total phosphorus is roughly characteristic of water masses though of doubtful utility as a tracer of water masses. The distribution of phosphorus found in the southern Labrador Sea has been described.

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FOREWORD

This is the annual report of the International Ice Patrol for 1953. Annual reports have been published since 1913 with the exception of the World War I years. Although the International Ice Patrol was also suspended during the World War II years, ice conditions were observed and reported. These reports contain detailed information of ice conditions in the North Atlantic, ice movements and physical oceanography in the Grand Banks region and the Labrador Sea, and many other related subjects from year to year. For the history and development of the International Ice Patrol the reader is referred to the previous bulletins of this series.

The purpose of the International Ice Observation and Ice Patrol Service in the North Atlantic is to afford transatlantic shipping maximum protection from the danger of drifting ice. The basic problem of ice drifting into the shipping lanes during the spring and early summer has not changed since the very first ice patrol. However, new methods and techniques have constantly been sought for, always with the objective of providing greater safety for international shipping. The introduction of oceanography studies in the 1920's has been an important factor in contributing to the efficiency of ice patrol. The development of radar and the use of aircraft for ice observation have also played a significant role.

For a summary of ice conditions during 1953 the reader is referred to pages 10-15. For a summary of the physical oceanography of the Grand Banks region and the Labrador Sea in 1953, the reader is referred to page 45. Authors of the section of this bulletin dealing with oceanography were Oceanographer Floyd M. Soule, LCDR A. J. Bush, and LT J. E. Murray. Other sections of the report were written by LT R. E. Lenczyk, USCG.

INTERNATIONAL ICE PATROL 1953

The International Ice Observation and Ice Patrol Services in the North Atlantic Ocean for 1953 were conducted as usual by the United States Coast Guard carrying out the provisions of the International Convention for the Safety of Life at Sea, London, 1948, and the U. S. Code, Title 46, Sections 738-738d.

The duty of Commander, International Ice Patrol to protect shipping from drifting ice entails a three-phase operation: (1) the continuous search for and location of all ice by the Ice Patrol planes (and cutters if needed), (2) the collection, plotting, and evaluation of the ice sighted and reported from all sources with the aid of oceanographic and meteorological data, and (3) the dissemination of ice information to shipping by means of scheduled ice broadcasts from Coast Guard Radio, Argentia, Newfoundland (NIK), and daily ice reports from the United States Navy Hydrographic Office, Washington, D. C. Oceanography is a valuable aid in the first two phases of the ice patrol operation. In planning ice observation flights, a knowledge of the currents and their branches in the Grand Banks region is a prime factor in determining the areas to be searched. To evaluate intelligently ice sightings and reports and the ice situation in general, the use of oceanography is invaluable.

Capt. G. Van A. Graves, USCG, was Commander, International Ice Patrol for 1953 and had his headquarters at the United States Naval Station, Argentia, Newfoundland. Two long-range PB1G (B-17) type aircraft attached to the United States Coast Guard Air Detachment, Argentia, were made available for aerial ice observation. The United States Coast Guard Cutter *Evergreen*, a 180-foot tender class cutter, was assigned as oceanographic vessel and the United States Coast Guard Cutters *Tampa* and *Achushnet* were designated as surface patrol vessels. These two latter ships remained on standby in their home ports in the United States. The *Evergreen* conducted 4 oceanographic surveys during the regular season and 1 postseason survey in July. These oceanographic surveys are discussed in detail in another section of this bulletin. For the third successive year, it was not necessary to use the two cutters assigned for ice patrol, thereby keeping the cost of operation to a minimum.

The United States Coast Guard Air Detachment, Argentia, Newfoundland, began intermittent preseason ice reconnaissance flights over the Grand Banks area and to the north on 10 February, at the

request of Commander, International Ice Patrol. Results of these flights indicated that the ice situation was normal, and that there was no immediate threat to shipping in February or early March. An advance party arrived at Argentia on 3 March to open the Ice Patrol Office, and the first ice observation flight was flown on 6 March. Commander, International Ice Patrol arrived with the remainder of his staff on 9 March, and United States Coast Guard Radio Station, Argentia (NIK), opened on 14 March to receive sea water temperatures, weather and ice reports from shipping. Twice daily reports of ice conditions to the United States Hydrographic Office, Washington, D. C., were commenced the same day, and NIK ice broadcasts to shipping were begun 19 March.

The major feature of the 1953 ice season was the fact that a potential threat of major proportions existed in mid-March, but only a minor threat developed, and instead of expanding in April and May, as is normal, this threat rapidly vanished by the end of March. At mid-March, the berg concentrations and the pack ice limits were similarly menacing as those of 1948 and 1950, the heaviest recent ice years. By the end of March, the ice situation compared favorably with 1951 and 1952, two of the lightest ice years on record. This complete reversal of form is attributed to three events in the latter part of March: (1) On 10 March, a low-pressure area passed just south of the ice limits bringing easterly winds of 35 to 40 knots for 2 days, thus driving the pack ice and bergs therein toward the coast, and removing all but 3 bergs from the east branch of the Labrador Current. (2) This was followed by an extensive stationary high which remained in the area for the next 10 days producing sunny and mild weather this whole period, thus melting and thinning the pack ice and warming the surrounding waters. (3) This period of unseasonably warm weather was followed by a slowly moving low just south of the ice limits causing easterly winds of 35 to 40 knots for 3 days, thus further reducing the already thinned and weakened pack ice offshore of Newfoundland, and driving the suspected heavy concentration of bergs to the north toward the coast and into the bays removing what chance they may have had of reaching the steamer tracks. Of the many bergs just north of $48^{\circ}00'$ N., only 3 remained in the Labrador Current and moved south, and of the 3, 2 bergs, in the form of a small berg and 2 growlers, reached track C, having traveled about 435 miles in 12 days, a rate of 36 miles per day. (See fig. 1.) This was the only ice to reach the shipping lanes which pass under the Tail of the Banks and was last sighted as 1 growler and 1 disintegrated growler in position $42^{\circ}37'$ N., $50^{\circ}22'$ W. These two growlers soon melted, and no other ice moved south of $48^{\circ}00'$ N., along the east slope of the Grand Banks. The other bergs moved toward the coast and into the bays or grounded on the north sector of the Banks and then drifted slowly to the south-southwest until disintegration. The cycle

of the threat of ice to shipping, the gradual expansion of the threat, and its gradual diminishing normally requires 3 months, but in 1953, this cycle was completed in less than 2 weeks.

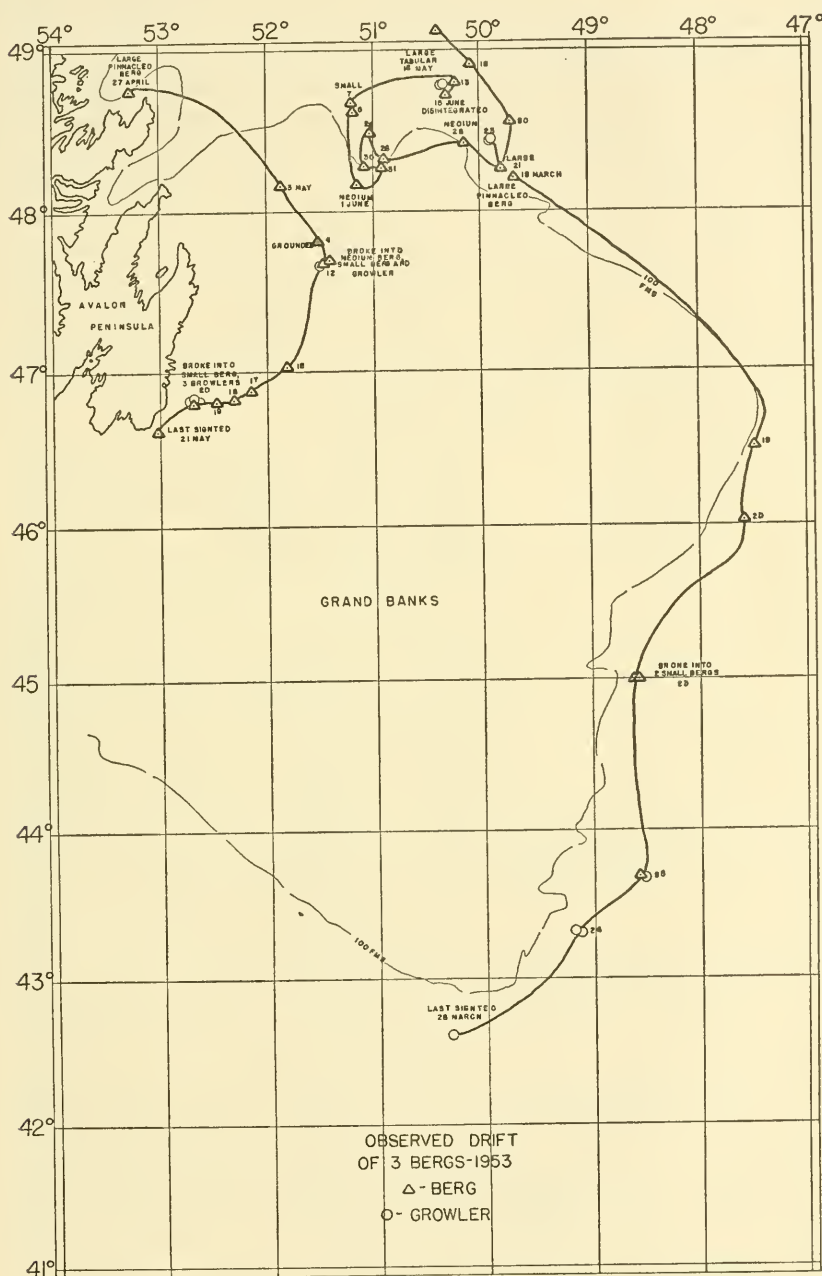


FIGURE 1.—Observed drift of three bergs in 1953.

For the remainder of the season, a few bergs drifted singly to a position near the northeast slope of the Grand Banks, but none managed to drift farther south. Instead, these bergs either drifted to the northeast until melting, or grounded on the north edge of the Banks and drifted slowly south-southwest until disintegration. Also, there were occasional bergs drifting south close along the Avalon Peninsula. Figure 1 shows the track of one of these bergs. Although these bergs were not a menace to the more southerly routes, their movement was closely watched because some vessels were using track F and because of the usual coastal traffic. There was some concern during April that a weather system producing strong westerly winds just north of the Grand Banks might blow the remaining pack ice with the numerous bergs entrapped therein from the bays and close along shore out to sea and into the Labrador Current. No such storm developed, and actually, the prevailing wind direction for April was easterly. The pack ice had thinned and receded sufficiently by the end of April to prevent any such threat.

The Newfoundland pack ice attained maximum southern and eastern limits on 20 March, when a tongue extended from the main pack at about $48^{\circ}00'$ N., to latitude $46^{\circ}45'$ N., approximately along the 100-fathom curve on the east slope of the Banks. For the first time in 3 years, pack ice closed the port of St. John's Newfoundland, and extended as far south as Cape Race. Scattered strings and patches of field ice extended about 80 miles south from the main tongue and about 20 miles south of Cape Race and west into Placentia Bay. From 20 March to the end of the month there was a remarkable and very significant recession of the pack ice limits, and by the middle of April the only pack ice remaining was close alongshore north and west of Cape Freels, Newfoundland. This ice persisted until the middle of May. By the first of June, there was no pack ice below $54^{\circ}35'$ N., and northward the pack was close alongshore, light, and discontinuous. The limits of pack ice in comparison with other years was normal until 20 March. From then on, the limits were considerably less than normal. A flight was made on 6 June from Argentia to the north along the Newfoundland and Labrador coasts to Cape Chidley and sighting the southern part of Hudson Strait, in order to determine the number of bergs in this particular annual crop which had survived to 1953. Combining the total number of bergs counted on this flight with other bergs known to have come south during 1953, it is estimated that this number was 450, or only slightly above the annual average number of bergs that drift south of $48^{\circ}00'$ N. As the berg mortality is known to be high along the Labrador coast, this limited number of bergs precluded anything but a light year in 1953.

A total of 56 bergs drifted south of $48^{\circ}00'$ N., 16 south of $47^{\circ}00'$ N., and 4 south of $46^{\circ}00'$ N., in 1953. The southernmost berg sighted

was at 43°42' N., 48°37' W., and the southernmost ice sighted was two growlers at 42°37' N., 50°22' W. A record of the number of bergs drifting south of 48°00' N., has been kept annually since 1913 and is listed for comparison in table 1. The annual average of bergs drifting south of 48°00' N., from 1913 through 1952 is 397. For the past 3 successive years, the number of bergs south of 48°00' N., has been much less than average. As a matter of fact, it can be seen from table 1 that the total of 76 bergs for the past 3 years is considerably less than the average number of bergs for a single year. Since 1913 there is only 1 other 3-year stretch of very light ice years, 1940-42. This 3-year period was immediately preceded and followed by very heavy years. It will be interesting to see what type of ice season 1954 brings.

The Gulf of St. Lawrence had one of its lightest ice seasons in history. The Canadian Department of Transport began daily

Table 1.—RECORD OF THE NUMBER OF BERGS DRIFTING SOUTH OF 48° N., ANNUALLY, 1913-53

Year	Esti- mated number bergs crossing 48° N.	Position of most southerly berg		Pack ice season as a whole	
		North latitude	West longitude		
		° ' "	° ' "		
1913.....	550	43 02		Brief, below normal.	
1914.....	731	40 55	47 38		
1915.....	468	41 56	52 37		
1916.....	54	41 50	49 10		
1917.....	38				
1918.....	199			Limited extent, below normal.	
1919.....	317	41 40	44 32		
1920.....	445	40 32	49 05		
1921.....	746	41 00	49 32		
1922.....	523	41 05	51 28		
1923.....	236	39 08	48 30		
1924.....	11	41 11	48 18		
1925.....	109	41 35	49 50		
1926.....	345	40 57	48 38		
1927.....	389	42 43	49 45		
1928.....	515	41 08	47 58	Brief, below normal.	
1929.....	1,351	41 09	48 42	Widespread, above normal.	
1930.....	475	40 28	47 22	Brief, below normal.	
1931.....	13	45 50	52 24	Widespread, compact, above normal.	
1932.....	514	41 30	47 35		
1933.....	216	43 21	50 42		
1934.....	560	42 28	50 28		
1935.....	875	41 00	49 00		
1936.....	22	45 35	47 40	Brief, below normal.	
1937.....	470	42 10	49 45	Long continued, above normal.	
1938.....	664	40 23	48 53		
1939.....	850	Position 60 miles south of track A.			
1940.....	2	47 42	50 57	Limited extent, below normal.	
1941.....	2				
1942.....	30	46 18	52 56		
1943.....	840	41 38	48 37		Long continued, above normal.
1944.....	700	41 51	50 22		Brief, below normal.
1945.....	1,083	41 25	47 00	Brief, below normal.	
1946.....	430	40 54	40 26		
1947.....	63	40 50	46 42		
1948.....	523	41 19	45 16		
1949.....	47	46 13	53 55		
1950.....	460	43 10	47 57	Average.	
1951.....	6	46 33	47 35	Do.	
1952.....	14	47 45	47 59	Brief, below normal.	
1953.....	56	43 42	48 37	Do.	
				Normal to third week in March.	
				Marked recession followed to end of season.	

observation flights over the Gulf of St. Lawrence on 1 April, and at the very early date of 2 April reported that the steamer tracks for Cabot Strait to the St. Lawrence River and to Montreal were navigable. By 15 April all the gulf and river routes were open to navigation except the Strait of Belle Isle, which was navigable by 11 May, also a very early opening date. The ice situation in the Gulf of St. Lawrence is of much interest, for many requests are received from shipping for ice information in the gulf and on the river route. Table 2 below lists the approximate opening dates of the Gulf of St. Lawrence and the Strait of Belle Isle.

Table 2.—THE APPROXIMATE OPENING DATES FOR THE GULF OF ST. LAWRENCE AND THE STRAIT OF BELLE ISLE FOR THE YEARS 1946-53

Year	Gulf of St. Lawrence	Strait of Belle Isle	Year	Gulf of St. Lawrence	Strait of Belle Isle
1946.....	24 Apr.	1 June	1950.....	16 May	9 June
1947.....	26 Apr.	15 May	1951.....	30 Apr.	2 May
1948.....	21 May	7 June	1952.....	16 May	3 July
1949.....	28 Apr.	20 June	1953.....	15 Apr.	11 May

Aerial ice observation flights on 1 June revealed just one offshore berg south of $53^{\circ}00'$ N., in position $48^{\circ}10'$ N., $51^{\circ}00'$ W. This berg was first sighted at the end of April in position $52^{\circ}10'$ N., $51^{\circ}43'$ W., and had drifted south in the Labrador Current at 10 miles per day. (See fig. 1.) Its position on the banks and out of the main Labrador Current, its small size, and the warming of the water all reduced greatly the possibility of this berg ever reaching the shipping lanes. Consequently, the services of the International Ice Patrol for 1953 were terminated on 6 June.

Although the International Ice Patrol is terminated annually when it is apparent that shipping is safe from the menace of ice for the remainder of the year, Commander, International Ice Patrol keeps himself informed of the ice situation throughout the year. A plot of all ice reported during the off-season is maintained and occasionally the United States Coast Guard Air Detachment, Argentia, makes post-season ice reconnaissance flights at the request of Commander, International Ice Patrol to insure that the steamer tracks remain ice free. Such a flight was made on 29 December in connection with two large bergs reported at $49^{\circ}30'$ N., $50^{\circ}30'$ W., on 24 December. The two bergs were not sighted on this flight which scouted the area to the south and southeast of the reported position of the bergs. Subsequent ice reconnaissance flights made in January 1954 to locate and determine the drift of these two bergs, as well as any other ice in the area, will be discussed in the 1954 Ice Bulletin of this series.

AERIAL ICE OBSERVATION

In 1953, two PB1G (B-17) aircraft assigned to the United States Coast Guard Air Detachment, Argentia, Newfoundland, performed the ice observation flights, supplemented by PBV's when advantageous. The persistence of bergs in potentially dangerous positions and along the east coast of Avalon Peninsula throughout the season required frequent ice observation flights.

A qualified ice observer was assigned to each ice observation flight. The ice patrol aircraft were equipped with two automatic-tracking loran receivers, and a continuous watch was maintained on both receivers during flights to insure precise navigation. The flights were ordinarily planned a day in advance, and were laid out usually with legs 25 miles apart. The scouting interval was increased or decreased as necessary to fit special situations, mainly the changing visibility conditions.

There was a total of 45 ice observation flights made on 38 different days. On 7 occasions, 2 flights were flown the same day. Of the 45 flights, 13 had a visual effectiveness of 50 percent or less. The visual effectiveness of a flight is the ratio of the area actually visually searched to the area planned to be searched, usually on the basis of 12½ miles visibility. The actual effectiveness of a flight may be much greater than the visual effectiveness by means of a concurrent radar search and diverting from the planned track to attempt identification of radar targets. It is considered that there were 32 days out of a possible 88, from 6 March to 1 June inclusive, with satisfactory weather for observation in flight areas.

On a monthly basis, there were 13 good observation days in March from the sixth to the end of the month, 9 in April, and 8 in May. June is not included due to the termination of aerial ice observation on the sixth of that month. Ten of the eleven flights in March had a visual effectiveness greater than 50 percent. In April and May, 9 of 13 and 10 of 17 flights respectively had a visual effectiveness greater than 50 percent. March was the best month for flight observation, and as the percentage of fog over the Grand Banks gradually increased during the season, April and May were progressively worse flight months. For a closer study of flight statistics, see table 3 below.

Table 3.—AERIAL OBSERVATION FLIGHTS AND WEATHER DURING THE 1954 ICE SEASON

Month	Satisfactory flight days	Number of flights	Actual flight days	Flights 50 percent visual effect or less	Average visual effect	Miles flown
					<i>Percent</i>	
March (6-31).....	12	11	11	1	85	12,130
April.....	9	13	10	4	64	13,460
May.....	8	17	14	7	61	16,200
June (1-6).....	3	4	3	1	72	5,270
Total 1953.....	32	45	38	13	71	47,060

COMMUNICATIONS

Commander, International Ice Patrol used United States Coast Guard Radio Argentina, Newfoundland (N1K), for communicating with shipping. In January 1953, the Coast Guard Search and Rescue Group, Argentina, was established and also assigned the call N1K. In the past, Radio Station N1K had been used exclusively by the International Ice Patrol, so that when N1K opened to serve the Search and Rescue Group, many ships thought that ice patrol had begun, when actually N1K was not used by the ice patrol until 14 March. The Search and Rescue Group and the International Ice Patrol both used the same radio call N1K throughout the 1953 season. At the end of the season, as a result of Commander, International Ice Patrol's recommendation, the radio call N1K was assigned exclusively for ice patrol use, and a different call was assigned to the Search and Rescue Group so no future difficulty is anticipated. Radio Station N1K was secured by Commander, International Ice Patrol on 6 June until the 1954 ice season.

Ice bulletins were broadcast twice daily at 0048 and 1248 G. M. T., beginning 19 March to the end of the ice season, on frequencies 155, 5320, and 8502 kilocycles after preliminary call on 500 kilocycles. The frequency 8502 kilocycles replaced 8425 on 15 April. Special ice bulletins were broadcast on a few occasions when the ice situation warranted them. Twice daily ice reports to the United States Hydrographic Office, Washington, D. C., were begun 14 March and continued to the end of the season, for inclusion in the United States Navy Radio, Washington (NSS), daily ice information bulletins at 0430 and 1630 G. M. T. The twice daily reports were also sent to the Canadian Ice Information Officer, Canadian Department of Transport, Halifax, Nova Scotia, and the N1K ice broadcasts were sent to the Royal Canadian Naval Radio Station, Albro Lake (CFH), for inclusion in their hydrographic broadcasts. If a vessel failed to receive desired ice information from any of the above methods of dissemination, the vessel could simply call N1K on 500 or 8280 kilocycles and ask for special ice information on the working frequency of 468 or 8250 kilocycles.

There was a gratifying increase in cooperation from merchant vessels in the submitting of sea water temperature, weather, and ice reports. The number of sea water temperatures submitted was almost double that of 1952, and the number of reporting vessels increased by more than 50 percent. Commander, International Ice Patrol extends his heartiest thanks to all ship masters for their splendid cooperation. These reports are an invaluable source of oceanographic and meteorological data, and are mutually beneficial to shipping and to the International Ice Patrol. All sea water temperatures are plotted, and a surface isotherm is constructed every fortnight during

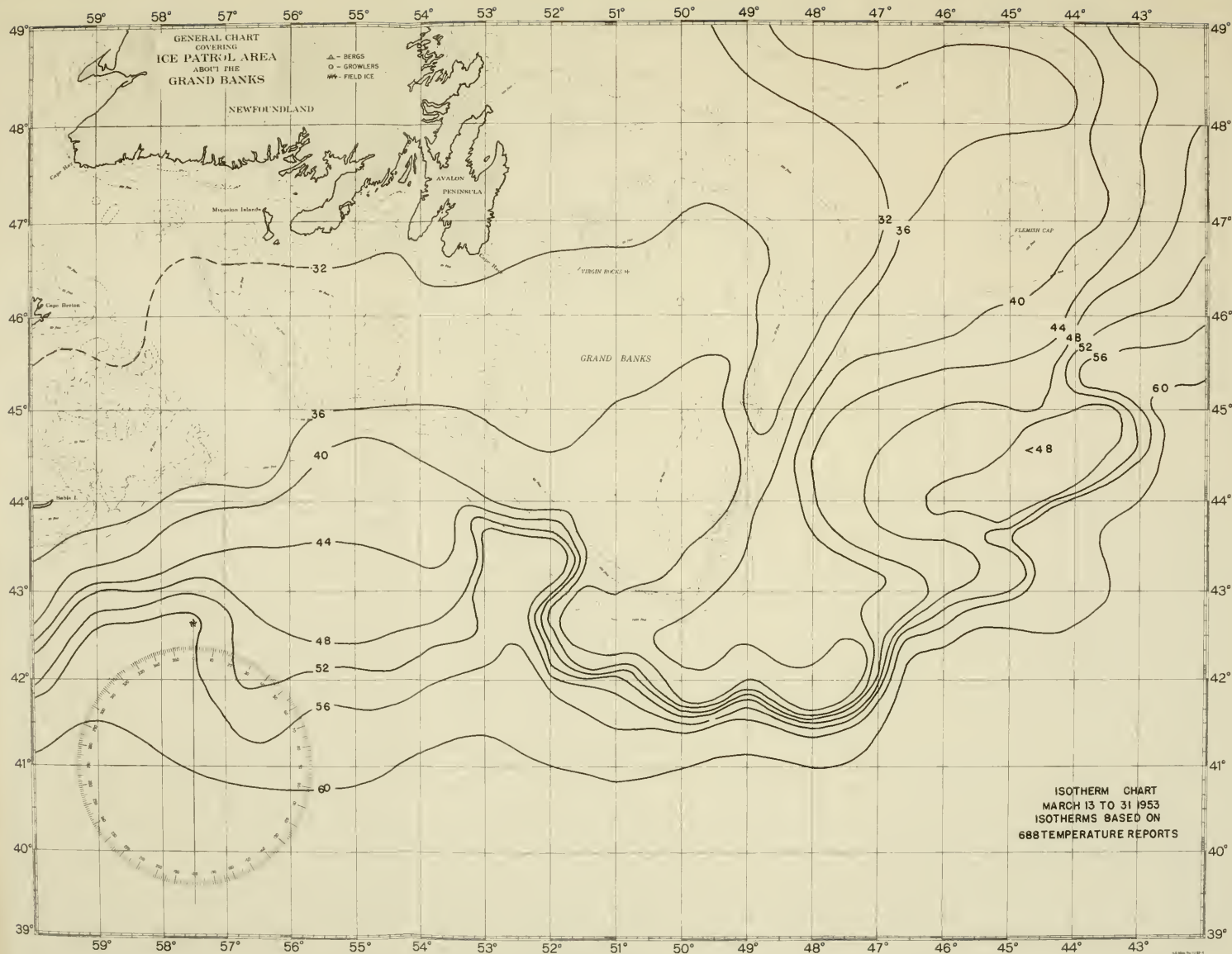


FIGURE 2—Surface isotherms for the period 13-31 March 1953.

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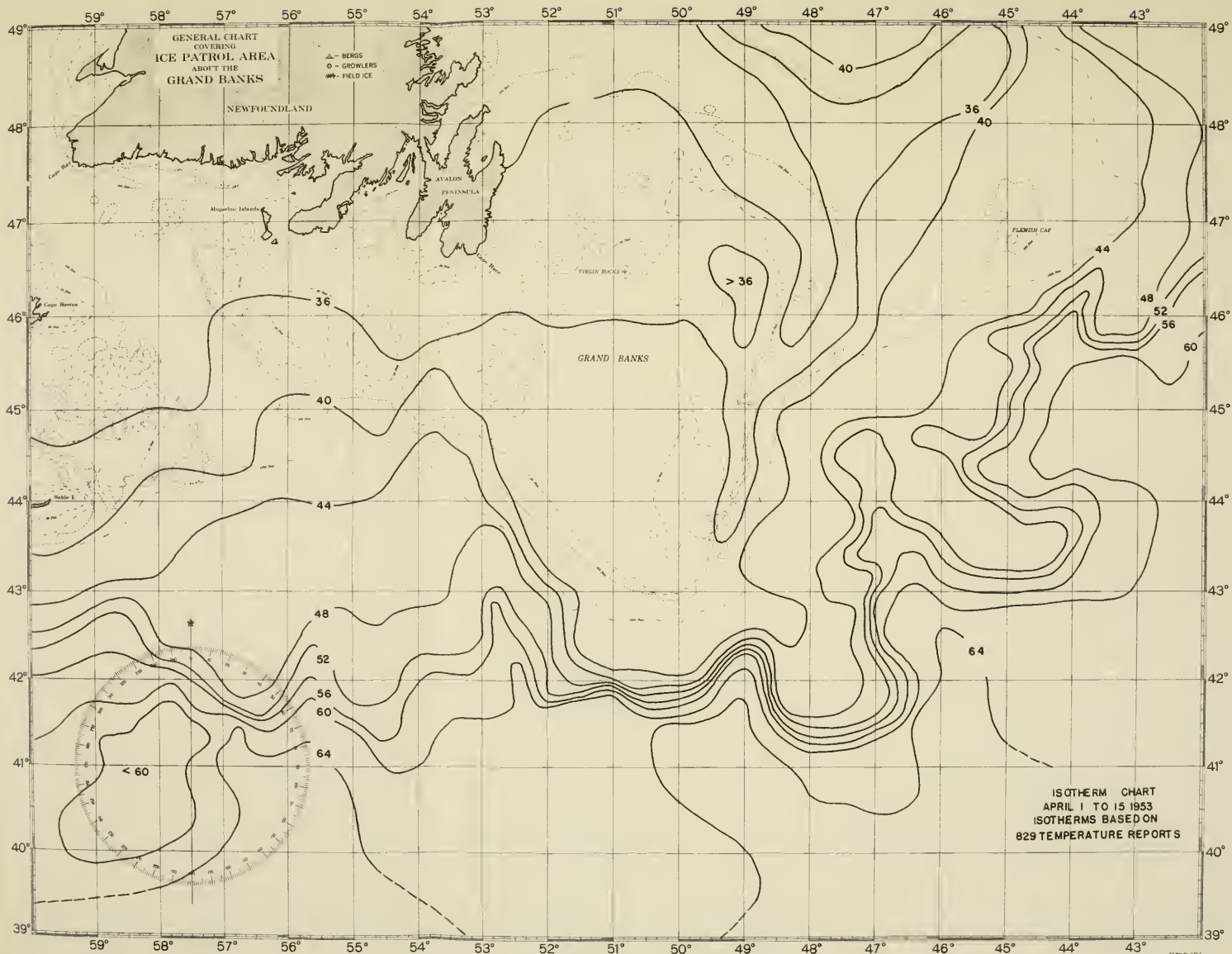


FIGURE 3—Surface isotherms for the period 1-15 April 1953.

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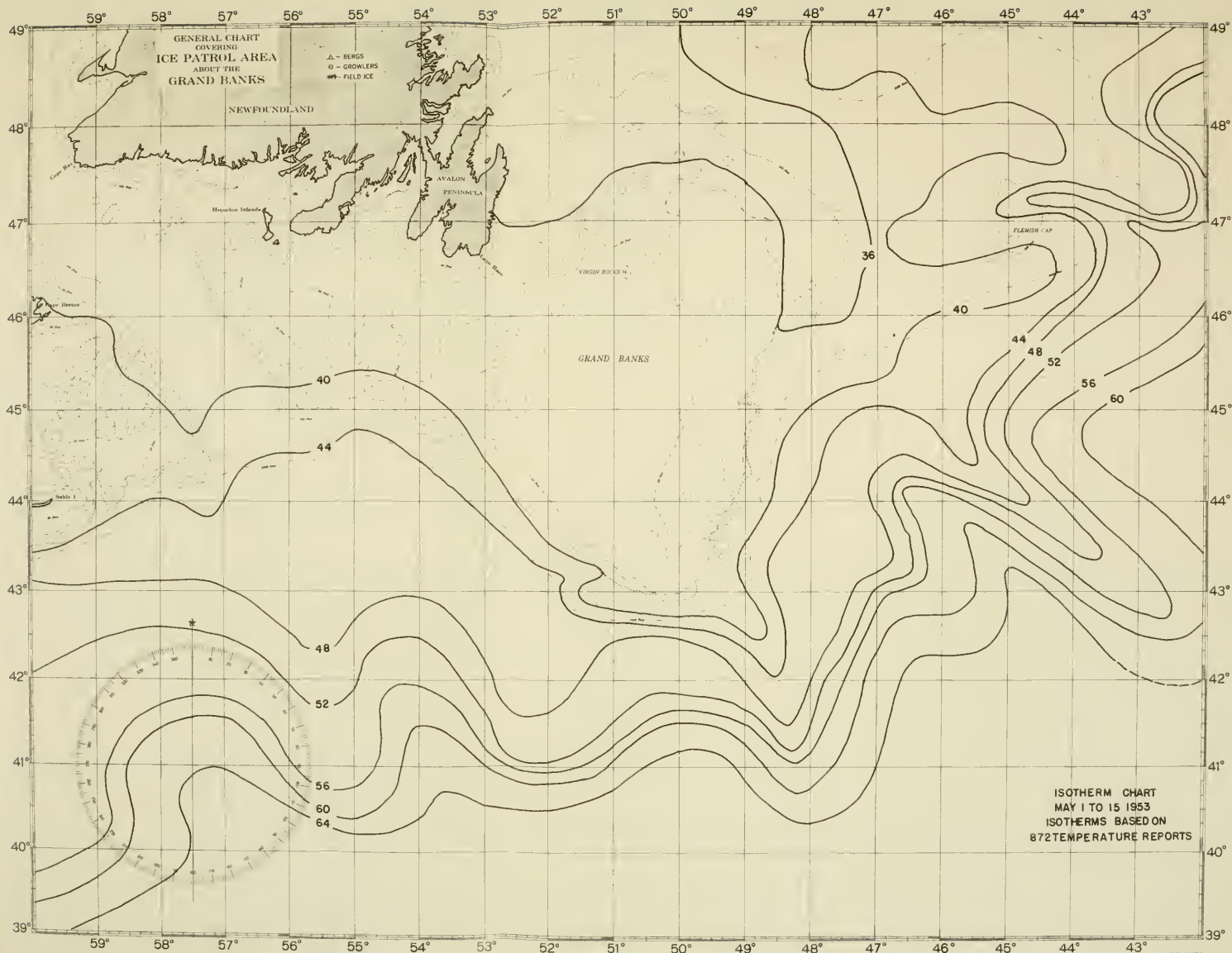


FIGURE 5—Surface isotherms for the period 1–15 May 1953.

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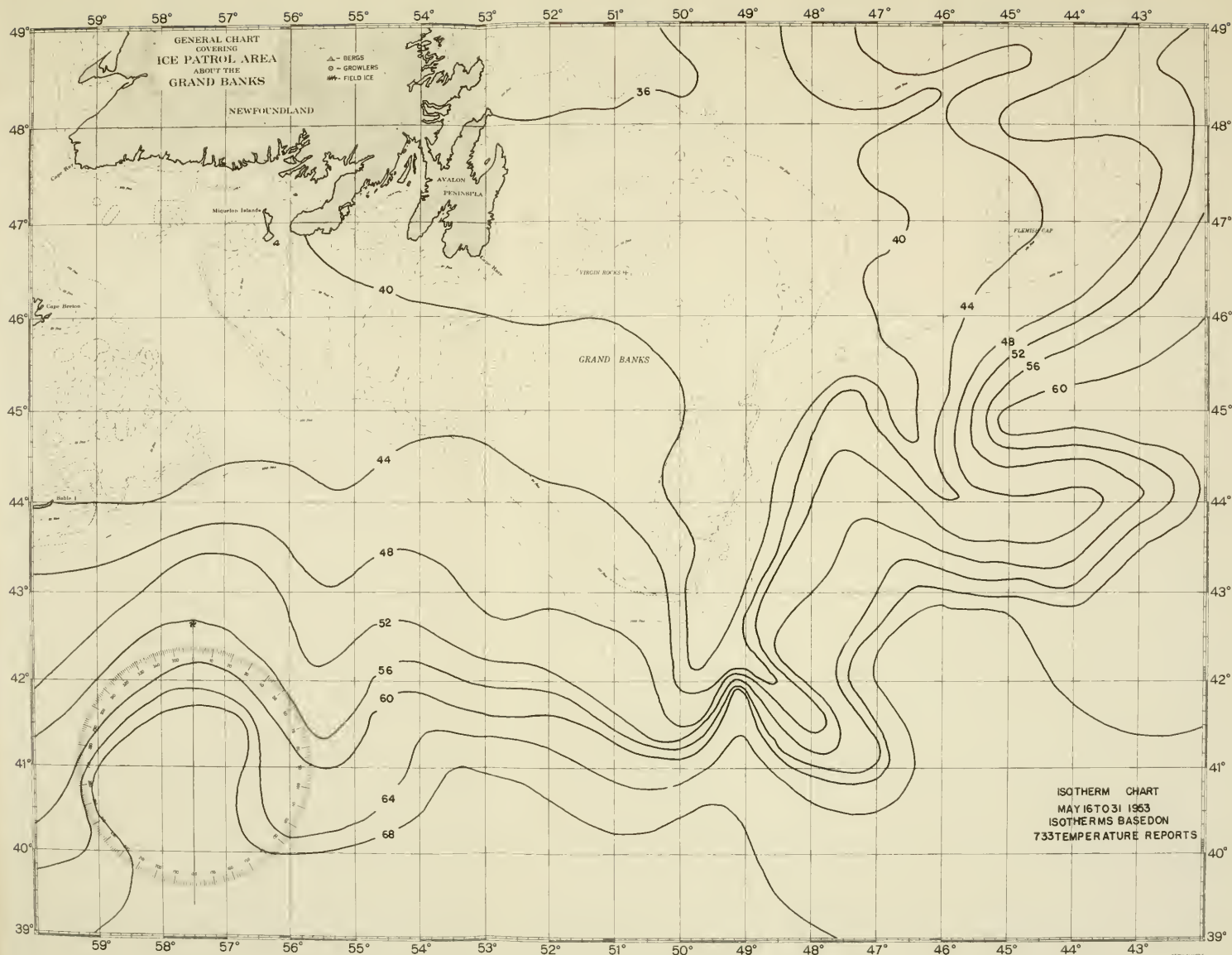


FIGURE 6—Surface isotherms for the period 16–31 May 1953.

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the season. These charts are valuable to the ice patrol, for they indicated the general features of the Labrador and the Atlantic Currents, in the important area where they meet near the Tail of the Grand Banks. Trends in the ever changing currents and their branches can be spotted quickly from sea water temperature reports. The weather reports, particularly the visibility and the wind direction and force, are extremely useful to Commander, International Ice Patrol in planning ice observation flights. The isotherm charts for the 1953 season are shown in figures 2 to 6 inclusive. Although flights are usually planned a day in advance on the basis of weather forecasts by the United States Navy Fleet Weather Central, Argentina, all ship weather reports in the vicinity of the planned flight area are carefully scrutinized, especially the morning of a flight. As a result, flight plans have been advantageously altered on the basis of these valuable weather reports. Also, in forecasting berg drift, the wind direction and force as well as the surface ocean currents must be known. Finally, but most important of all, the regular reports every 4 hours from ships include position, course, and speed and are an important aid to Commander, International Ice Patrol in performing his duty to protect shipping from the danger of ice. The Ice Patrol Office maintains a plot of all reporting ships, and so can warn individual vessels, directly, of the presence of ice in or near their tracks. Thus the reporting ship receives the maximum protection from ice and the ice patrol receives valuable information not otherwise available.

During the 1953 season NIK sent or received 5,510 radio messages and 12,179 landline messages. A tabulation of reports received for the entire season is as follows:

Total number of ships sending reports.....	401
Number of ice reports.....	244
Total number of ships sending ice reports.....	119
Number of water temperatures.....	4, 438
Total number of ships sending water temperatures.....	335
Total number of ships requesting special reports.....	56
Total number of weather reports relayed to Observer, Wash..	620

The following is a list of the percentage distribution of reporting vessels by nationality. A total of 24 nations are represented:

	Percent
Great Britain.....	27. 0
United States.....	¹ 27. 0
Norway.....	8. 5
Netherlands.....	7. 8
Germany.....	4. 8
Italy.....	4. 5
Sweden.....	4. 5
Canada.....	3. 2
France.....	2. 8
Panama.....	2. 5
Other (14 nations).....	7. 4

¹ Includes 45 percent military.

In 1953, at the request of Commander, International Ice Patrol, the Commander, Eastern Area, USCG, conducted a survey of transatlantic shipping in the port of New York. Questionnaires were sent to vessels inviting comments and criticism of the services of the ice patrol. A similar survey among ships using the port of Halifax was conducted in 1952 by the Canadian Department of Transport. While these surveys cannot be considered all-inclusive, it is believed that a good cross section of ship operator's opinion was obtained. The suggestions and criticisms received are an aid to Commander, International Ice Patrol in improving the services of the ice patrol. Suggestions and criticisms from mariners are always welcome and should be addressed to the Commandant, U. S. Coast Guard, Washington 25, D. C.

ICE CONDITIONS 1953

JANUARY-FEBRUARY

The first ice sighting in the Newfoundland area was on 15 February showing scattered patches of field ice westward from $52^{\circ}10'$ W., between $48^{\circ}39'$ N., and $49^{\circ}45'$ N. On 20 February the pack ice extended as far south as $49^{\circ}00'$ N., and eastward to $51^{\circ}25'$ W., which was normal for this time of year.

On 21 and 22 February close pack ice extended eastward to $50^{\circ}40'$ W., between latitudes $51^{\circ}30'$ N., and $52^{\circ}30'$ N., and eastward to $50^{\circ}00'$ W., between latitudes $49^{\circ}00'$ N., and $49^{\circ}30'$ N. Also on the 22d numerous bergs and growlers, the southernmost in position $49^{\circ}25'$ N., $50^{\circ}45'$ W., were sighted. On the 23d an extensive area of field ice at $48^{\circ}24'$ N., $50^{\circ}07'$ W., was reported. The pack ice was on the move to the east and south. Scattered strings and patches were reported as far south as $46^{\circ}08'$ N., at $49^{\circ}10'$ W., on 24 February. This was the most southerly and most easterly ice reported for January and February. The pack now extended east to $49^{\circ}30'$ W., at latitude $48^{\circ}00'$ N., and was close pack west of $51^{\circ}30'$ W. On 29 February scattered field ice was reported east to $49^{\circ}32'$ W., at $49^{\circ}16'$ N., and east to $49^{\circ}16'$ W., at $48^{\circ}21'$ N. On 28 February the limits of close pack ice were determined to be a line from $50^{\circ}20'$ N., $50^{\circ}50'$ W., to $52^{\circ}22'$ N., $51^{\circ}00'$ W., and showed an easterly movement of about 30 miles in the past week.

There were no known icebergs south of $49^{\circ}00'$ N. Limits of pack ice and berg ice were about average with the exception that there was no pack ice or field ice along the east coast of Avalon Peninsula, Newfoundland. Distribution of ice for February is shown in figure 7.

MARCH

The results of preseason aerial ice reconnaissance and other ice reports in February 1953 showed the possibility of a normal ice year. If the pack ice continued to move southeast along the east

slope of the Grand Banks, the entrained bergs would soon be an active danger to shipping.

On 3 March, a 25-mile-wide tongue of open to close pack ice extended along to 100-fathom curve to a southern extremity of $47^{\circ}22'$ N., at $48^{\circ}50'$ W. The pack ice was definitely moving south. On 6 March the tongue of the pack ice had receded to the north-northwest about 80 miles, and had been reduced in width to 8 miles. The pack ice quickly expanded to its maximum limits during the third week of March and then literally vanished before the end of the month. By 20 March the pack ice covered the north sector of the Banks to about the 48th parallel with a tongue extending south along the east slope to $46^{\circ}45'$ N., $47^{\circ}10'$ W., the southernmost and easternmost extension of the pack for 1953, and another tongue extending just south of Cape Spear close along the Newfoundland coast. For the first time in 3 years the port of St. John's was closed to shipping. Within a few days scattered strings of ice extended to $45^{\circ}30'$ N., along the east slope of the Banks, and the tongue close along the Avalon Peninsula extended to Cape Race; however, the main pack was rapidly disintegrating. By the end of March practically the whole Grand Banks area was clear of all ice. The ice situation was now comparable to those of 1951 and 1952, two of the lightest ice years on record.

It is estimated that 21 bergs penetrated south of $48^{\circ}00'$ N., during the month, or more than the yearly totals of 1951 and 1952 which were 6 and 14 respectively. It is also estimated that 4 bergs came south of $47^{\circ}00'$ N., and 2 south of $46^{\circ}00'$ N. One small berg and 2 growlers drifted into the major transatlantic shipping lanes, tracks C and D. The southernmost ice reported was the growler at $42^{\circ}37'$ N., $50^{\circ}22'$ W., on 28 March.

The limits of pack ice for March were about normal compared to the average limits in the Ice Atlas for March. The limits and number of bergs were both greater than the averages in the Ice Atlas. Distribution of ice is shown in figure 8.

On 3 March close pack ice in the Gulf of St. Lawrence area extended inshore of a line from Cape des Rosiers to $48^{\circ}40'$ N., $62^{\circ}50'$ W., south to a position 20 miles east of North Pt., Prince Edward Island, to St. Paul Island. By 10 March practically the whole area of the gulf west of longitude $62^{\circ}00'$ W., was covered with newly formed ice which was to be the maximum ice limits for the year in that area. By 24 March there had been considerable improvement in the ice conditions in the gulf. At that time the steamer track between Cape Ray and Fame Point was practically clear, and the pack ice in the western and southwestern Gulf was now reported as open pack. By 30 March the St. Lawrence River was navigable to Montreal, and by 31 March the steamer track between Fame Point and Cape Ray was clear except for loosely scattered strings of drift ice to 30 miles east of Cape des Rosiers.

The recession of ice which began in the latter part of March continued in April. By 7 April the pack ice had receded to the Newfoundland coast at Cape St. Francis extending due north from this southern limit, and there were no offshore bergs south of 49°00' N.

Three bergs that might possibly move south toward the shipping lanes were sighted on 13 April in the vicinity of 49°00' N., between longitudes 51°00' W., and 51°42' W. Two of these bergs subsequently drifted to the southwest onto the Banks, and the other drifted southeast to 48°30' N., then to the northeast about 40 miles where it disintegrated. No other bergs moved into a potentially threatening position during April.

Near the end of the month there were only two offshore bergs south of 52°00' N., that might possibly drift to the northeast slope of the Banks and south toward the shipping lanes. The pack ice had receded northward and westward to Cape Freels and Fogo Island and had thinned sufficiently to preclude the possibility of any westerly wind driving numbers of bergs to the area northeast of the Grand Banks and thereby threatening the major tracks. Any ice threat to shipping in 1953 would now have to originate from the area north of 50°00' N., in the Labrador Current.

Passage through the Strait of Belle Isle was possible as early as 27 April, although a northerly wind could have filled the Strait with field ice in hours. At that time about 60 percent of the strait was covered with close pack ice, and the area to westward was clear. The prospect of a very early opening of the Strait of Belle Isle to shipping was very good.

It is estimated that 11 bergs drifted south of 48°00' N., during the month, but all 11 were in Trinity or Conception Bay or close along shore of the Avalon Peninsula. Two bergs drifted south of 47°00' N., both grounding on the east coast of Avalon Peninsula just south of 47°00' N. The limits of pack ice and field ice for April were much less than average, and the limits and number of bergs were less than the averages in the Ice Atlas. Distribution of ice is shown in figure 9.

In the Gulf of St. Lawrence the rapid disintegration of ice that began in the third week of March continued in April. Observation on 1 April showed that the steamer track from Cabot Strait to the St. Lawrence River was clear of all ice. The St. Lawrence River was reported navigable to Montreal by reinforced vessels. The only ice remaining in the gulf was close pack ice in Northumberland Strait north to Chaleur Bay and open pack ice from the Strait of Canso to East Point, Prince Edward Island. A day later the St. Lawrence River had only some light scattered ice and was therefore reported navigable to all ships. This early opening date is almost without precedent. By 15 April all routes and ports in the River and Gulf of St. Lawrence were reported open to navigation except the Strait

of Belle Isle. The only ice remaining was some loosely scattered ice in the western portion of Northumberland Strait which persisted until 24 April.

MAY

With the disintegration of the pack ice as far north as Cape Freels by the end of April, some bergs close along the coast were free to drift slowly south along the east coast of Newfoundland. This movement began in early May and continued throughout the month. Some bergs drifted south to Cape Race, Newfoundland, where they disintegrated, 2 bergs drifted just past Cape Race and south of $46^{\circ}00'$ N., and 1 berg rounded Cape Race and grounded in Trepassey Bay.

In early May the pack ice was practically nonexistent as far north as $54^{\circ}30'$ N., although loosely scattered strings and patches of field ice extended as far seaward as 150 miles north of $52^{\circ}00'$ N. Numerous bergs and growlers were sighted within 75 miles of the coast from Belle Isle to Hamilton Inlet, Labrador. A total of eight bergs were sighted between $51^{\circ}00'$ N., and $52^{\circ}00'$ N., in a position to drift south and perhaps become potential menaces to shipping. Only two of these bergs did drift south however. They advanced at a rate of about 10 miles per day to a position off the northeast slope of the Banks. The same fate, however, befell these bergs as a few others before them, for neither managed to remain in the Labrador Current for the trip south along the east slope of the Banks. One berg was last reported 18 May as a small berg in a position to the southwest of the Labrador Current near $48^{\circ}00'$ N., $50^{\circ}00'$ W., where it melted within 3 days. The other berg was a large tabular berg and seemed headed for and able to survive the trip south to the shipping lanes. As late as 21 May the berg was sighted on the northeast slope of the Banks where the oceanographic surveys in the earlier part of May and the latter part of May showed an easterly flow of the Labrador Current. However, the berg was sighted 2 days later about 15 miles to the west-northwest and consequently sightings and reportings showed a westerly drift until the end of the month. There were no other known offshore bergs south of $51^{\circ}00'$ N., at the end of May.

By the end of May all the bergs that had drifted south of Cape St. Francis along the east coast of Avalon Peninsula had disintegrated except for one small berg aground near Cape Broyle. There were still many bergs in the bays and close along shore to the north, but these bergs could never be threats to the United States-European shipping lanes, and it was very doubtful that they could even threaten track F. It was simply a matter of time until the bergs melted.

The Strait of Belle Isle and track G to eastward were clear of all ice except scattered bergs and growlers by 12 May, although it is believed that the strait was navigable at least a week earlier. This is one of the earliest openings of the Strait of Belle Isle on record. (See table

II.) The pack ice persisted in Notre Dame Bay until the middle of the month, but by the end of the third week of May, the few scattered fragments of ice off the Newfoundland Coast had disintegrated.

It is estimated that 18 bergs drifted south of 48°00' N., 10 bergs drifted south of 47°00' N., and 2 bergs drifted south of 46°00' N., during the month. The limits of pack ice and the limits and number of bergs were much less than average. Distribution of ice is shown in figure 10.

JUNE

On 1 June there was only one offshore berg south of 54°00' N., this berg being the one on the northern sector of the Banks mentioned previously. The berg was at 48°10' N., 51°09' W., a position 10 miles southwest of the reported position for 31 May. Its position, its small size and the warmness of the water precluded any possibility of its reaching the shipping lanes south of track F. The only other bergs were close alongshore and concentrated mostly around Fogo Island, Belle Isle, and Spotted Island. There was no pack ice or field ice south of 54°00' N.

On 6 June 178 bergs were counted from Notre Dame Bay to Hudson Strait. There was a significant absence of bergs north of 57°00' N., and the few that were sighted to the north were mostly small bergs and probably stragglers of the 1953 crop. Only 20 of these bergs were considered offshore bergs, or in the Labrador Current and likely to move further south, and no really large bergs were seen. The southern limit of the pack ice was 54°35' N., and from here to 58°30' N., the pack was close alongshore, light and discontinuous. North of 58°30' N., the pack extended to 70 miles offshore, becoming closer and heavier to northward.

The lone offshore berg south of 54°00' N., was last sighted 15 June in position 48°40' N., 51°20' W., and is believed to have disintegrated a day or two later, as it was neither sighted nor reported again.

It is estimated that six bergs drifted south of 48°00' N., during June, all in the vicinity of Cape St. Francis. The pack ice and berg limits and concentrations were much less than average. Distribution of ice is shown in figure 11.

JULY-NOVEMBER

During July a few bergs were reported inshore along the coasts of Labrador and Newfoundland. In addition, offshore bergs were reported as follows: one at 49°15' N., 52°13' W., one at 49°35' N., 52°40' W., and several more bergs north of 54°00' N. No ice drifted south of 49°00' N., during the month.

No ice was reported south of 51°00' N. during August, the southernmost being a large offshore berg at 51°05' N., 51°40' W. A few more offshore bergs drifted to positions south of 53°00' N., about 150 miles

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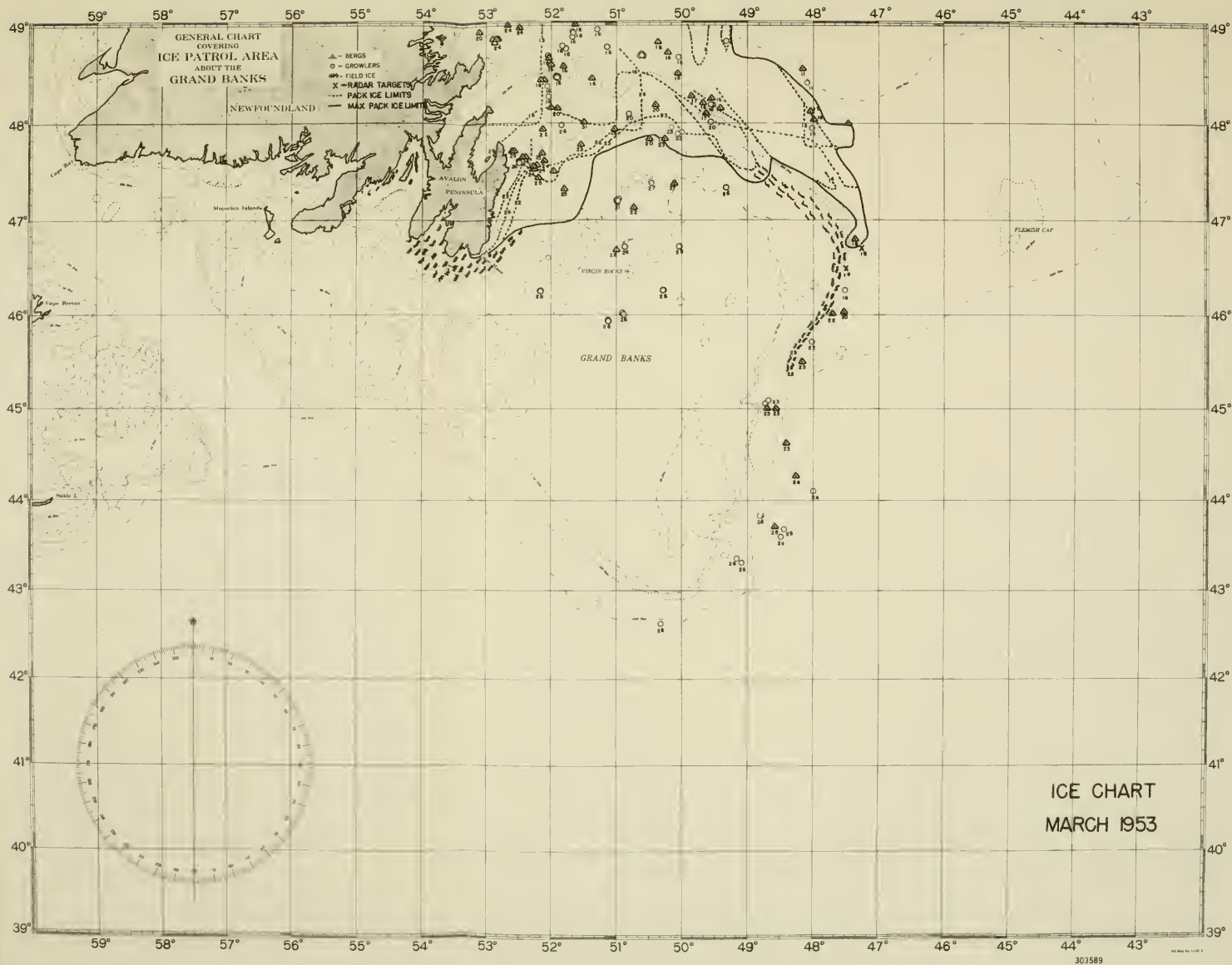


FIGURE 8—Ice conditions, March 1953. Figures indicate day of month ice was sighted or reported.

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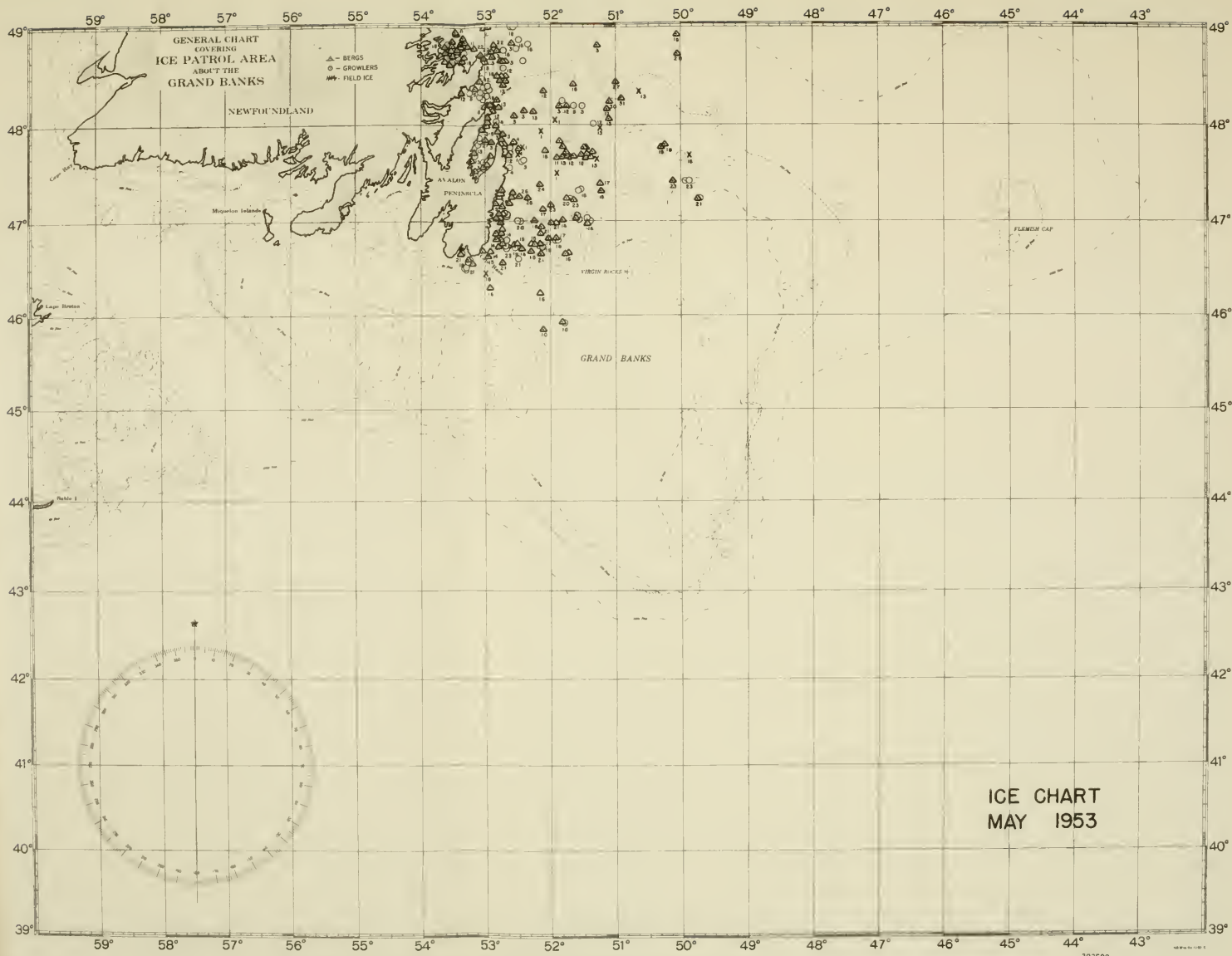


FIGURE 10—Ice conditions, May 1953. Figures indicate day of month ice was sighted or reported

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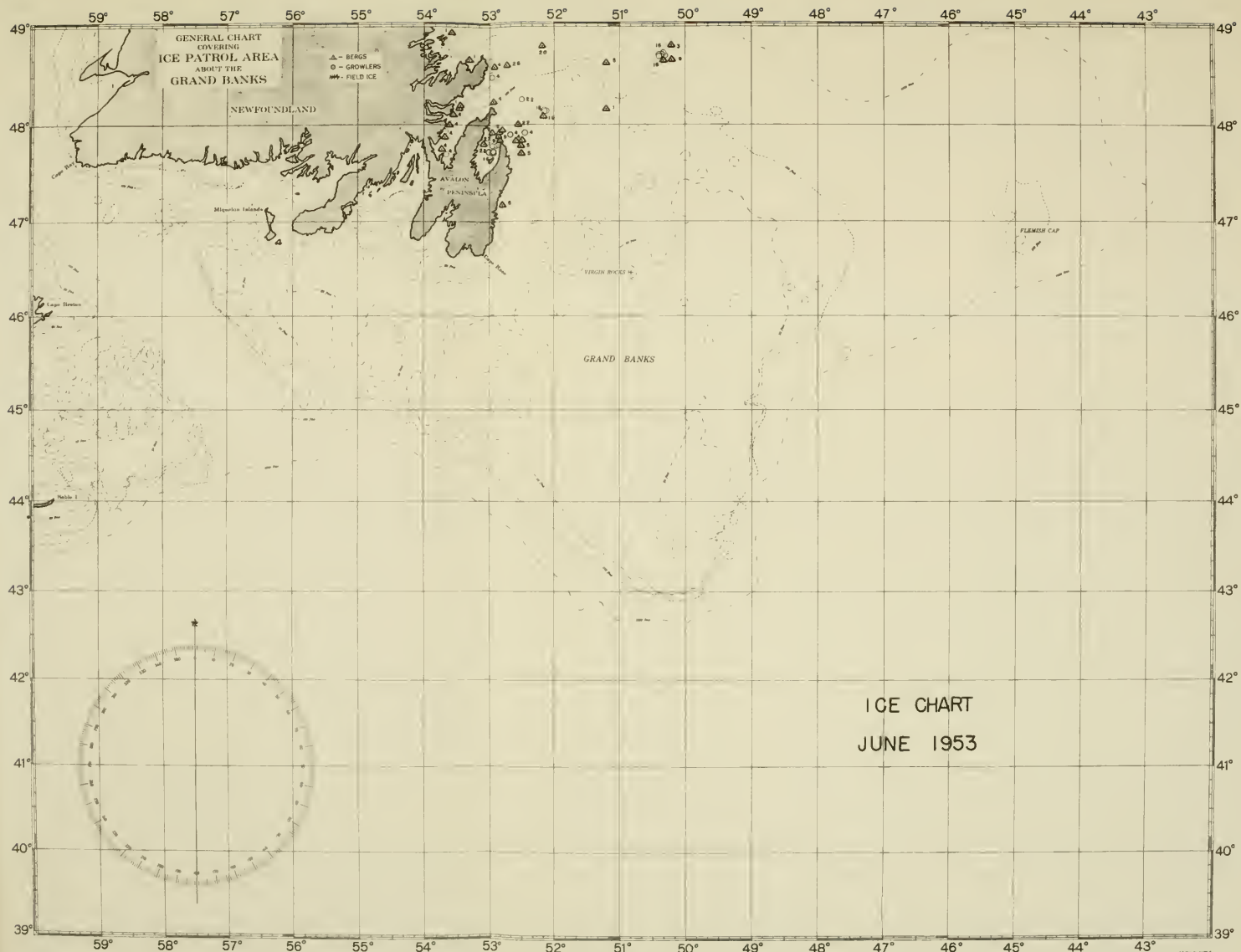


FIGURE 11—Ice conditions, June 1953. Figures indicate day of month ice was sighted or reported.

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off the Labrador coast. Several inshore bergs were scattered from the Strait of Belle Isle north along the Labrador coast.

Very little ice was reported during September and none south of the Strait of Belle Isle. Three bergs and many growlers were found in the strait and close in along the shore just to the north. A few more bergs were scattered off the Labrador coast north of 54°00' N.

Only a few bergs scattered inshore along the coasts of Newfoundland and Labrador north of 49°00' N., were reported during October.

There were no reports of ice south of 52°00' N., during November. Several inshore bergs were found to the north of that latitude along the Labrador coast. An interesting report was made of three bergs well to the southeast of Cape Farewell, Greenland, in position 58°00' N., 39°00' W.

During the entire period, July–November, no pack ice was reported in the Newfoundland-Labrador area and no bergs drifted south of 48°00' N. The pack ice and berg limits and concentrations were less than average.

DECEMBER

The month of December was marked by an unusual situation to the east and southeast of Cape Farewell, Greenland. Between 12 and 23 December, approximately 17 bergs and a number of growlers were reported scattered in that area, roughly along a line from 56°32' N., 40°45' W., to 61°37' N., 33°10' W., and thus at or even outside the extreme limits of icebergs and growlers as shown in the Ice Atlas for that area during December.¹

In the Newfoundland-Labrador area the only ice reported was two large bergs at 49°30' N., 50°30' W., on the 24th.

TABLE OF ICE REPORTS, 1953

No.	Date	Name of vessel	North latitude	West longitude	Description
1	Jan. 26	USCGC Campbell.....	58 37	43 20	10 bergs in this position.
2	do	do.....	58 35	42 56	4 bergs and some growlers.
3	do	do.....	58 39	42 06	Approximately 15 bergs in the vicinity.
4	Jan. 31	USCGC McCulloch.....	60 02	36 29	Small berg.
5	do	do.....	59 42	37 21	Do.
6	do	do.....	59 22	37 45	5 small bergs.
7	do	do.....	59 03	38 26	2 small bergs.
8	Feb. 16	USCG aircraft.....	48 39	52 10	Scattered patches field ice becoming consolidated to westward from 52°10' W. between 48°39' N. and 49°45' N.
			49 45	52 10	
			49 00	51 25	
			50 30	51 30	East limits of open field ice.
9	Feb. 20	do.....	51 00	51 35	
			51 30	50 40	
10	do	do.....	51 04	53 00	Growler.
11	do	do.....	51 35	52 12	Medium berg.
12	Feb. 21	USCGC Matagorda.....	53 15	51 40	Limits of scattered field ice becoming consolidated to west.
			to west and south indefinitely		

¹ A probable cause of this uncommon ice distribution was the departure from normal of the sea level barometric pressure pattern in the area which caused strong northwesterly winds to predominate there during the 2 month period prior to mid-December. It is of interest to note that in October 1938 a similar ice distribution existed together with abnormal strong northwesterly winds.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
13	Feb. 21	USCGC Matagorda	52 20	51 51	Numerous growlers.
14	do	do	52 25	52 12	2 small bergs.
15	do	do	52 34	51 59	Medium berg.
16	do	do	52 02	50 58	East limits scattered drifts field ice becoming consolidated to west.
17	do	do	52 30	51 12	
17	do	do	52 28	52 04	Small berg.
17	do	do	51 40	51 12	
18	Feb. 22	do	51 40	50 38	Area of close pack field ice.
18	do	do	52 30	51 15	
19	do	do	thence northwest	50 42	5 mile area of close pack field ice.
19	do	do	50 47	51 00	
20	do	do	51 15	50 50	Strings scattered drift ice east-west.
21	do	do	52 08	51 07	
21	do	do	49 25	50 45	Small berg.
21	do	do	49 03	50 20	
22	do	do	49 03	50 00	Limits area close pack ice.
22	do	do	49 32	50 25	
23	do	do	49 32	51 00	Radar target believed to be a growler.
23	do	do	thence northwest	49 41	
24	do	do	50 00	51 00	Limits all ice.
24	do	do	50 11	50 58	
25	Feb. 23	Cap Nord	49°00' N. to north	50°00' W. to west	Large area field ice.
26	do	do	48 35	50 05	Area open pack field ice.
26	do	do	48 24	50 07	
27	Feb. 24	Louisburg	46 09	59 13	Southern limits open field ice. Gulf of St. Lawrence.
27	do	do	to North	49 10	
28	do	Stockholm	46 08	49 10	Field ice.
28	do	do	48 04	50 12	
29	do	USCG aircraft	48 00	49 30	Limits scattered field ice.
29	do	do	48 30	51 20	
30	do	do	thence North	51 30	Close field ice.
30	do	do	to West and North	48 20	
31	Feb. 25	do	48 00	48 22	Small patch drift ice.
32	do	do	48 04	49 30	2 small patches drift ice.
33	do	USN aircraft	46 40	49 50	String drift ice.
34	Feb. 27	USCGC Rockaway	48 29	51 02	Scattered field ice and several small bergs.
34	do	do	49 16	49 32	
35	do	Stavangerfjord	48 13	50 08	Light field ice.
35	do	do	48 22	49 40	
36	Feb. 28	USCG aircraft	48 21	49 16	Limits close pack ice.
36	do	do	49 18	53 23	
36	do	do	53 20	52 10	Limits close pack ice.
36	do	do	50 20	50 50	
37	Mar. 3	do	52 22	51 00	Limits of open pack ice, gulf area.
37	do	do	Cape Smoky, Cape Breton to	46 15	
37	do	do	46 15	59 49	Limits of open pack ice, gulf area.
37	do	do	46 25	58 35	
37	do	do	thence northwest		

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			Cape des Rosiers to		
			48 40 | 62 40		
			to		
			48 00 | 63 10		
			to		
			47 05 | 63 10		
			to		
38	Mar. 3	Canadian Department of Transport.	47 00 | 62 00		Limits of newly formed ice.
			to		
			St. Paul Island		
			to		
			46 28 | 58 25		
			to		
			Flint Island		
			to		
			Cape Smoky		
			48 20 | 50 10		
			to		
			47 25 | 49 08		
			to		
39	Mar. 4	USCG aircraft.....	47 22 | 48 48		Limits of field ice, 25 mile tongue defined by listed points. Pack ranges from open for 30 miles to close farther northwest.
			to		
			47 34 | 48 37		
			to		
			48 20 | 49 30		
			thence northwest		
			47 45 | 52 00		
40	do	do	to		Scattered strings and patches field ice.
			47 23 | 52 00		
			53 45 | 52 50		
			to		
			53 10 | 52 50		
			to		
41	Mar. 5	USN aircraft.....	52 00 | 52 30		Boundary of pack ice.
			to		
			51 30 | 51 30		
			thence southeast		
42	Mar. 6	Ice Patrol plane.....	48 35 | 49 50		Open pack ice field 8 miles wide. Scattered patches and strings of drift ice to 15 miles south and 10 miles west of this pack ice.
			to north		
43	do	do	48 40 | 51 30		Scattered patches and strings of field ice.
			to north		
44	do	do	48 18 | 52 18		Very loosely scattered strings slush ice.
			to northeast 10 miles		
45	Mar. 7	Mormacelm.....	48 44 | 49 21		Detached ice field extending north and south to range of visibility and 2 miles east and west; 1 growler.
46	Mar. 11	Topeka.....	49 12 | 48 04		Large berg.
47	do	USN aircraft.....	48 24 | 48 07		Growler.
48	do	do	48 33 | 48 12		Berg.
49	do	Canadian Department of Transport.	Gulf of St. Lawrence.		Almost complete coverage of gulf north of 46°00' N. and west of 62°00' W.
50	do	do	do		Strait of Canso, close pack ice.
51	do	USCGC Sebago.....	49 23 | 49 36		Narrow group of broken field ice patches 60 yards wide running in northwest direction.
52	do	Eastore.....	45 34 | 58 53		Large patches drift ice.
53	do	USN aircraft.....	50 20 | 53 50		Numerous bergs.
54	do	do	51 25 | 54 28		Several bergs.
55	do	do	51 30 | 54 44		Large bergs.
56	do	do	52 02 | 54 30		Do.
57	do	do	52 20 | 54 20		Do.
58	do	Narsarsssnak AB.....	BW-3 Fjord		Few bergs and growlers; seaward of BW-3, few bergs.
			75 47 | 71 50		
			to		
			72 50 | 61 10		
			to		
			74 00 | 59 50		
			to		
59	do	USN aircraft.....	Cape York		Limits pack ice, ten tenths coverage. Some N-S irregular leads and cracks.
			to		
			Conical Rock		
			to		
			Thule		
60	Mar. 12	USCGC Casco.....	48 14 | 49 08		SE limits tongue of loose field ice extending to northwest.
61	do	Mormacisle.....	48 27 | 49 36		Field and slob ice running west-northwest to east southeast 8 miles wide, extends horizon to horizon.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
62	Mar. 12	Canadian Department of Transport.	Gulf of St. Lawrence.		No change from March 11th.
63	do	USN aircraft	West Coast Greenland.		Thule to Frobisher Bay, newly frozen ice with leads and polynyas oriented generally NE-SW.
64	Mar. 13	Ice Patrol plane	47°47' N. between 48°08' W. and 47°27' W.		Southern limits of all field ice.
65	do	do	East Coast of Newfoundland.		Close pack ice extending east from coast of Newfoundland at 48°00' N. to 52°10' W. then north.
66	do	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
67	do	Narsarsuaq AB.			BW-3 Fjord, few growlers. Seaward of BW-3, few bergs.
68	do	USN aircraft	Notre Dame Bay, Newfoundland to Hamilton Inlet, Labrador.		Close to consolidated pack ice.
69	Mar. 14	Mormacoak	47 25 to 47 45 to NW.		Heavy field ice and numerous growlers;
70	do	Unidentified aircraft	49 30 51 20		Large berg.
71	Mar. 15	Sparreholm	58 09 47 33		Field ice, partly heavy.
72	do	do	47 56 48 11		Berg.
			48 07 48 04		
			48 35 49 10		
73	do	Cape Race radio	48 20 to 48 50		Broken field ice.
			47 50 to 48 45		
			Cape St. Francis		
			48 10 to 52 10		
			48 00 to 51 30		
			48 00 to 51 00		
74	Mar. 16	Ice Patrol plane	48 30 to 51 00		Tongue of field ice ranging from open to close pack at 48°00' N. to solid farther Northwest.
			48 00 to 49 30		
			47 48 to 48 00		
			47 20 to 47 30		
			47 20 to 47 20		
			thence northwest		
75	do	do	47 55 48 02		Growler.
76	do	do	48 00 47 32		Berg (same as 72).
77	do	do	48 03 48 03		Berg.
78	do	do	48 08 52 03		Do.
79	do	do	48 10 49 35		2 growlers.
80	do	do	48 12 49 43		Very large pinnacled berg.
81	do	do	48 14 49 35		Berg.
82	do	do	48 15 52 04		Growler.
83	do	do	48 22 52 04		Do.
84	do	do	48 25 52 12		2 bergs.
85	do	do	48 26 51 25		Berg.
86	do	do	48 27 51 57		5 growlers.
87	do	do	48 30 50 06		Large dome berg.
88	do	do	48 34 51 52		Berg.
89	do	do	48 35 52 03		Large berg.
90	do	do	48 39 52 05		Berg.
91	do	do	48 40 50 05		Growler.
92	do	do	48 42 50 38		4 growlers.
93	do	do	48 43 50 15		Large dome berg.
94	do	do	48 44 51 49		Growler.
95	do	do	48 45 51 53		Do.
96	do	do	48 46 51 10		Do.
97	do	do	48 48 50 24		Berg.
98	do	do	48 52 51 43		Growler.
99	do	do	48 54 51 43		Do.
100	do	do	48 56 51 43		Do.
101	do	do	48 57 51 20		Do.
102	do	do	49 00 51 40		Berg.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
103	Mar. 16	Ice Patrol plane.....	Area bounded by 49 00 51 00 to to		5 bergs and 15 growlers.
104	do.	do.	49 10 51 40		Growler.
105	do.	do.	49 03 51 43		Do.
106	do.	do.	49 05 50 50		Huge tabular berg (same as 70).
107	do.	do.	49 07 50 38		4 bergs.
108	do.	Narsarssuak AB.....	49 11 51 42		Few bergy bits and growlers. Seaward of BW-3, few bergs.
109	do.	Gardenia.....	BW-3 Fjord		Small patches field ice offshore.
110	do.	USCGC Mackinac.....	Motion Head, Newfoundland. 48 46 49 14		Field of pack ice.
111	do.	Cairnesk.....	48 15 49 22 47 29 47 23		Broken-up brash and pancake ice extending in north-south direction.
112	do.	USCGC Mackinac.....	47 35 47 12		Southwest edge of pack ice.
113	Mar. 17	Narsarssuak AB.....	48 08 49 22		BW-1 Fjord, 10 percent pack ice. BW-3 Fjord, pack ice and bergy bits.
114	do.	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle		Sea ice.
115	do.	Pajala.....	48 06 49 52		Eastern and western edge of ice field fairly heavy in center with scattered growlers and thick cakes.
116	do.	do.	48 24 49 17		Large berg (same as 87).
117	do.	do.	48 05 49 42		Small berg.
118	do.	do.	48 15 49 54		String of ice approximately 1 mile long.
119	do.	do.	47 43 50 42		Close pack ice.
120	do.	USCGLTS, Battle Harbor, Labrador.	48 10 49 28		Sea ice.
121	do.	USCGLTS, Bonavista, Newfoundland.	Strait of Belle Isle		Sea pan ice to horizon.
122	do.	Lyngenfjord.....	Cape Bonavista..... 48 19 50 15 to to		Southwest and northeast of broken field ice.
123	Mar. 18	Canadian Department of Transport.	48 31 49 52 Cape des Rosiers to to		Gulf ice. Close pack ranging to open pack within these limits.
124	do.	do.	49 00 63 40 to to		Large field loose drift ice.
125	do.	do.	48 00 61 20 to to		Field ice 3 to 5 miles wide 25 miles long extends northeast from Flint Island.
126	do.	USCGLTS, Battle Harbor, Labrador.	47 00 61 20 to to		Sea ice.
127	do.	Gripsholm.....	Cape North St. Paul Island to to		Strings of slush ice.
128	do.	do.	46 30 59 50		Stationary radar target believed berg (same as 77).
129	do.	Stavangerfjord.....	Gulf of St. Lawrence. 46 45 57 10 46 41 47 16		Southern limit ice field of small light ice extending north.
130	do.	Narsarssuak AB.....	46 40 47 20 46 55 47 25		BW-3 Fjord, few bergy bits and little pack ice; seaward of BW-3, few bergs and bergy bits.
131	Mar. 19	Cairngowan.....	46 30 47 30		Radar target presumed large berg (same as 80).
132	do.	Narsarssuak AB.....			BW-3 Fjord, few bergy bits and some pack ice.
133	do.	Alcoa Pioneer.....	46 49 47 24		Field ice.
134	do.	do.	46 47 47 24		Berg (same as 81).
135	do.	Nova Scotia.....	47 17 47 13		East and west limits of open slob ice.
136	do.	USCGC Half Moon.....	47 12 47 30 46 16 47 33		Large growler drifting 220° at 1.5 knots (same as 77).
137	do.	do.	46 18 47 33		Southern limit of open field ice.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			47 25	52 40	
			47 30	52 30	
			47 55	52 20	
			48 08	51 00	
			47 40	49 50	
			47 40	48 40	
			47 00	47 17	
138	Mar. 20	Ice Patrol Plane-----	46 42	47 28	Limits of pack ice. Tongue of open pack ice extends from main pack at 48°00' N. along the 100 fathom curve to a southern extremity at 43°44' N. 47°25' W.; the main pack extends to coast of Newfoundland, and is 8 miles east and south of St. John's Harbor. Loose patches and strings extend 25 miles farther south along coast.
			46 43	47 20	
			46 55	47 08	
			47 20	47 08	
			47 38	47 30	
			47 38	47 55	
			48 10	49 15	
			thence north		
139	do	do	46 02	47 35	Berg (same as 80).
140	do	do	47 48	50 32	Berg (same as 97).
141	do	do	47 50	50 18	Berg (same as 93).
142	do	do	48 00	49 35	Growler.
143	do	do	48 05	50 50	Do.
144	do	do	48 08	51 57	Berg (same as 78).
145	do	do	48 10	50 26	Large berg (same as 106).
146	do	USCGLTS, Battle Harbor, Labrador.	Straits of Belle Isle		Sea ice.
147	do	Halifax radio	Gulf of St. Lawrence.		Small field close pack ice south of Cihoux Island.
148	do	Fort Hamilton	47 02	52 34	Strings and patches field ice.
149	do	Narsarsuak AB			BW-3 Fjord, little pack ice; seaward of BW-3, few small bergs.
150	do	St. John's radio	St. John's Harbor, Newfoundland.		Closely packed ice from shore to 3 miles at Cape Spear. Ice to horizon northward. St. John's Harbor blocked.
151	do	USCGLTS, Bonavista, Newfoundland.	Cape Bonavista		Sea ice.
152	do	do	48 55	53 10	Large berg.
153	Mar. 21	USCGLTS, Battle Harbor, Labrador.	Straits of Belle Isle		Sea ice.
154	Mar. 22	do	do		Do.
155	do	USCGLTS, Bonavista, Newfoundland.	Cape Bonavista		Do.
156	do	USAF aircraft	47 55	52 10	Berg 100 feet high and approximately 1,000 feet long (same as 78).
157	do	Nova Scotia	East Coast Avalon Peninsula.		Pack ice from St. John's Harbor to Ferryland Head, Newfoundland.
158	do	Cape Race radio	Cape Race		Loose strings of field ice 10 miles north-east of Cape Race.
159	do	Prins Alexander	45 53	47 40	
			to		
160	do	do	45 42	48 05	Strings of field ice extending to north.
161	do	Fort Hamilton	45 42	48 03	Small growler (same as 81).
			46 55	52 45	Scattered strings and patches field ice extend 10 miles from Newfoundland coast.
162	do	Unidentified vessel	St. John's Harbor, Newfoundland.		Heavy pack ice.
163	do	Ice Patrol plane	East coast, Avalon Peninsula.		Field ice extends south along Newfoundland coast to southern extremity 10 miles north of Cape Race. Close pack ice extends 8 miles offshore at St. John's Harbor.
164	do	do	45 40	48 00	Scattered strings field ice extend north from this position.
165	do	do	46 00	47 45	Small berg (same as 87).
166	do	do	47 07	50 46	Drydock berg (same as 97).
			49 15	53 30	
167	Mar. 23	USN aircraft	49 45	51 00	8 very large bergs in pack ice along this line.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' ° '		
			47 30 | 52 30 |		
			47 25 | 52 05 |		
			47 40 | 51 20 |		
			48 00 | 50 00 |		
168	Mar. 23	Ice Patrol plane.....	47 50 | 48 00 |		Ice tongue extends from southern extremity at 47°33'N. 49°00'W. to 48°20'N. where joins pack to Newfoundland coast. Tongue ranges open to close to consolidated pack. Strings and patches extend from tongue along 50 and 100 fathom curve to 45°28'N. 48°25'W.
			47 50 | 49 30 |		
			47 35 | 49 20 |		
			47 20 | 49 00 |		
			47 23 | 48 55 |		
			48 00 | 49 10 |		
			thence northwest		
169	do.....	do.....	East Coast Avalon Peninsula.		Tongue close pack ice extends south from Cape St. Francis to Cape Ballard. 8 miles wide at St. Johns Harbor to 3 miles at Cape Ballard. Strings and patches extend to Cape Race.
170	do.....	do.....	45 00 | 48 38 |		Berg (same as 80).
171	do.....	do.....	45 00 | 48 45 |		Do.
172	do.....	do.....	45 02 | 48 44 |		Growler (same as 80).
173	do.....	do.....	45 04 | 48 43 |		Small growler (same as 80).
174	do.....	do.....	45 30 | 48 12 |		Small berg (same as 87).
175	do.....	do.....	47 25 | 52 15 |		Pinnacled berg (same as 78).
176	do.....	do.....	47 46 | 51 35 |		Drydock berg.
177	do.....	do.....	47 48 | 50 20 |		Growler.
178	do.....	do.....	47 52 | 50 04 |		2 growlers.
179	do.....	do.....	47 56 | 50 10 |		Growler.
180	do.....	do.....	48 08 | 49 27 |		Large berg.
181	do.....	USC GLTS, Bonavista, Newfoundland.	Cape Bonavista.....		Sea ice.
182	do.....	USC GLTS, Battle Harbor, Labrador.	Strait of Belle Isle.....		Do.
183	do.....	Cairndhu.....	46 07 | 47 37 |		Strings of field ice.
			45 49 | 47 48 |		
184	do.....	Idefjord.....	47 07 | 47 45 |		Drifting sea ice.
			47 03 | 48 48 |		
185	Mar. 24	Belray.....	44 38 | 48 27 |		Large berg (same as 80).
186	do.....	USNS General Callan.....	46 27 | 53 01 |		Ice floes scattered over 2 mile area.
187	do.....	USC GLTS, Battle Harbor, Labrador.	Strait of Belle Isle.....		Sea ice.
188	do.....	USC GLTS, Bonavista, Newfoundland.	Cape Bonavista.....		Sea ice and 4 large bergs approximately 10 miles northeast cape.
189	do.....	Unknown USN Vessel.....	47 20 | 52 29 |		Heavy ice pans.
			Coast of Newfoundland.		
190	do.....	do.....	47 31 | 52 18 |		Berg 30 feet high.
191	do.....	do.....	46 54 | 52 32 |		Close pack ice but navigable.
192	do.....	Cape Race radio.....	Cape Ballard to 3 miles southeast Cape Race.		Strip of field ice.
193	do.....	US Air Force.....	47 32 | 52 17 |		Berg.
194	do.....	do.....	47 36 | 52 08 |		Do.
195	do.....	Cape Race radio.....	Cape Ballard to West of Cape Race		Strings of heavy slob ice 1 mile off shore.
196	do.....	USN aircraft.....	Notre Dame Bay, Newfoundland.		Bay 8 tenths pack with scattered bergs.
197	do.....	do.....	Strait of Belle Isle.....		2 tenths new freeze ice with broad polynas south of Belle Isle.
198	do.....	USNS General Callan.....	Cape Race.....		Large area heavy pans field ice extending from Cape Race southward approximately 15 miles in length and 1 mile wide.
199	do.....	Canadian Department of Transport.	(St. Paul Island..... to 5 miles south of Magdalen Island. to Cape D'Espoir to Southwest Point Anticosti Island)		Limits of open pack, 50 percent coverage.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
200	Mar. 24	Canadian Department of Transport	Approaches to Sydney Harbor.		Small patches loose drift ice off Low Point.
201	do	Ice Patrol plane	Cape Race, Newfoundland.		Limits of field ice extend 4 miles off coast to east and south.
202	do	do	43 35	48 31	Growler (same as 77).
203	do	do	44 05	48 01	Growler (same as 80).
204	do	do	44 16	48 18	Same berg (same as 80).
			49 20	51 30	
			49 45	51 55	
			50 10	51 55	
			50 30	52 00	
205	do	USCG Aircraft	51 00	52 20	Limits of pack ice with strings extending to east of limits and south 20 miles and 50 miles north of 52°00'N.
			51 40	53 00	
			52 00	53 10	
			52 30	53 30	
			thence north		
206	do	do	48 58	52 32	Berg.
207	do	do	49 00	52 42	Do.
208	do	do	49 04	52 20	Do.
209	do	do	49 05	52 35	Do.
210	do	do	49 07	52 28	Do.
211	do	do	49 08	52 14	Do.
212	do	do	49 13	52 19	Do.
213	do	do	49 58	54 58	Do.
214	do	do	50 10	55 00	Do.
215	do	do	50 23	55 08	Do.
216	do	do	52 15	54 20	Do.
217	do	do	52 17	53 40	Growler.
218	do	do	52 22	54 02	Berg.
219	do	do	East Coast Avalon Peninsula.		Limits of pack ice; solid pack 15 miles seaward from shore at St. John's Harbor.
			53 00	52 35	
			55 25	54 00	
220	do	USN aircraft	56 01	57 07	Limits of pack ice.
			48 54	52 40	
221	Mar. 25	US Air Force	46 32	53 09	13 bergs in vicinity.
			Cape Race		
222	do	Unidentified USN vessel	Mistaken Point		Heavy field ice, soft and navigable.
223	do	do	46 40	51 02	Small berg.
224	do	Grootebeek	43 49	48 50	2 crowlers (same as 80).
225	do	Cape Race radio	East Coast of Cape Race.		Close pack ice to shore.
226	do	do	West Coast of Cape Race.		Strings of ice with lakes of water.
227	do	Narsarssnak AB	Seaward of BW-3.		Few small bergs.
228	do	do	BW-3 Fjord		Do.
229	do	USCG LTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
230	do	USCG LTS, Bonavista, Newfoundland.	Cape Bonavista		Sea ice.
231	do	Unidentified USN vessel	46 43	50 03	Small growler (same as 78).
232	do	do	49 24	46 42	Growler.
233	do	Mormacelm	46 36	52 05	Do.
			46 24	53 10	
			46 50	52 40	
234	do	Ice Patrol plane	47 00	51 38	Limits of pack ice, varying from close to open pack along Newfoundland coast.
			47 28	51 25	
235	do	do	45 20	48 30	Strings and patches field ice extend northeast about 50 miles.
236	do	do	43 40	48 29	Growler (same as 80).
237	do	do	43 42	48 37	Small berg (same as 80).
238	do	do	47 18	51 50	Drydock berg (same as 176).
239	do	do	47 29	52 00	Large berg (same as 78).
240	do	do	47 40	52 10	Large berg.
241	do	do	47 42	52 37	Small berg.
242	do	do	47 42	52 39	Berg.
243	do	do	47 42	52 53	Do.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
244	Mar. 25	BOAC aircraft.....	East Coast of Newfoundland.		At 49°00' N, pack ice extends east from Newfoundland coast and is solid for 52½ miles, thence broken floes for 35 miles, no bergs.
245	Mar. 26	Mormacelm.....	47 20	49 20	Growler.
246	..do..	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle..		Pancake ice.
247	..do..	USCGLTS, Bonavista, Newfoundland.	Cape Bonavista....		Sea ice.
248	..do..	Seythia.....	43 18	49 08	Growler (same as 80).
249	..do..	..do..	43 21	49 12	Do.
250	..do..	Ice Patrol plane.....	Cape Race		Limits of field ice.
			to		
			47 05	52 49	
			to		
			47 30	52 30	
			to		
			to		
			47 50	50 40	
			to		
			48 30	50 40	
		thence north-westward			
251	..do..	..do..	46 16	50 18	Growler (same as 231).
252	..do..	..do..	46 42	50 54	Growler (same as 223).
253	..do..	..do..	47 33	52 19	Berg (same as 240).
254	..do..	..do..	47 36	52 32	Growler.
255	..do..	..do..	47 37	52 29	Berg (same as 241).
256	..do..	..do..	47 37	52 30	Growler.
257	..do..	..do..	47 38	52 28	Berg (same as 242).
258	..do..	..do..	47 55	51 04	Small berg.
259	..do..	..do..	47 59	51 44	Growler.
260	..do..	Narsarsuak AB.....	BW-3 Fjord.....		1 berg and few growlers.
261	..do..	..do..	Seaward of BW-3..		Few bergs and bergy bits.
262	Mar. 27	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle..		Sea ice.
263	..do..	Cape Race radio.....	Cape Race.....		East shore, close pack ice; west shore, close pack ice with polynas. Loose ice extending east from shore about 2 to 5 miles.
264	..do..	Cutler.....	48 33	49 23	Southern edge field ice.
265	..do..	USN aircraft.....	47 22	52 01	Eastern edge field ice, loosely scattered.
266	..do..	..do..	47 22	50 10	Berg 70 feet high with 2 pinnacles (same as 180).
267	..do..	..do..	47 22	50 30	Growler 15 feet high, 50 feet wide.
268	..do..	USCGLTS, Bonavista, Newfoundland.	Cape Bonavista....		Sea ice.
269	Mar. 28	Stavangerfjord.....	46 00	50 55	2 growlers (same as 223).
270	..do..	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle..		Sea ice.
271	..do..	USCGC Chambers.....	45 56	51 10	2 growlers (same as 223).
272	..do..	Ice Patrol plane.....	East Coast Newfoundland		Limits of field ice with strings south of a line between 46°55' N., 52°53' W. and 47°05' N., 52°15' W.
			to		
			47 10	52 46	
			to		
			to		
			to		
			46 37	53 05	
			to		
		1 mile seaward of Cape Pine			
273	..do..	..do..	42 37	50 22	Growler (same as 80).
274	Mar. 29	USCGC Chambers.....	46 16	52 11	Growler (same as 78).
275	..do..	..do..	46 23	53 40	Small patches field ice.
276	..do..	..do..	Cape Race		Field ice limits.
			to		
			Cape St. Mary		
			to		
			to		
			approximately 15 miles south		
277	..do..	USCGC Chincoteague....	Cape St. Mary.....		Field ice extending 5-miles southwest of Cape St. Mary.
278	..do..	USN aircraft.....	50 00	49 15	Some scattered ice along this line;
			to		
			52 00	52 30	
			to		
			54 00	53 00	
			to		
			to		
279	Mar. 30	Ice Patrol plane.....	South Coast of Avalon Peninsula.		Patches and strings field ice extend 8 miles south of Cape Race and 5 miles south of Avalon Peninsula between Cape Race and Cape St. Mary.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
280	Mar. 30	MSTS Office, St., John's, Newfoundland.	St. John's Harbor..		Open pack ice in harbor.
281	...do....	Canadian Department of Transport.	Cape des Rosiers to 48 40 | 63 00 to 10 miles north of Bird Rocks to 10 miles off Cape Ray		Some scattered ice along this line.
282	...do....	...do....	Strait of Canso to Northumberland Strait		Strait of Canso clear to Hastings. Open ice George Bay, thence to East Point. Prince Edward Island, some scattered ice.
283	...do....	Cape Race radio.....	Cape Race and Cape Ballard.		Eastern and western shore, close pack ice extending 1 to 3 miles off shore.
284	Mar. 31	...do....	Cape Race.....		Close pack ice east and west of Cape Race.
285	...do....	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle..		Pancake ice.
286	...do....	USN aircraft.....	48 00 | 51 45		Small berg.
287	...do....	MSTS Office, St. John's, Newfoundland.	St. John's Harbor.		Close pack ice.
288	...do....	Orion.....	47 11 | 51 00		4 growlers (same as 180).
289	...do....	Canadian Department of Transport.	Gulf of St. Lawrence.		Some scattered ice between Rosiers and 48°40' N., 63°30' W., thence to 10 miles off Cape Ray, Newfoundland.
290	...do....	Fort Avalon.....	St. John's Harbor.		Heavy open pack ice to 9½ miles east.
291	Apr. 1	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle..		Pancake ice.
292	...do....	Canadian Department of Transport.	Gulf of St. Lawrence.		Open ice in George Bay, thence scattered drift ice to East Point, Prince Edward Island.
293	...do....	Narsarsuak AB.....	BW-3 Fjord.....		Few bergy bits.
294	...do....	...do....	Seaward of BW-3 Fjord.		Few bergs and bergy bits.
295	Apr. 2	Canadian Department of Transport.	Quebec to Cape Salmon thence eastward to Rosiers		Light broken ice.
296	...do....	Narsarsuak AB.....	BW-3 Fjord.....		Few bergy bits and growlers.
297	...do....	...do....	Seaward of BW-3 Fjord.		Few bergs and bergy bits.
298	Apr. 3	USCGC Casco.....	51 40 | 50 46		Many growlers.
299	...do....	...do....	49 11 | 50 50		2 growlers.
300	...do....	Narsarsuak AB.....	BW-3 Fjord.....		1 berg, few growlers and some thin ice.
301	...do....	...do....	Seaward of BW-3 Fjord.		Few bergs.
302	Apr. 4	USCGC Casco.....	47 10 | 50 25		Radar contact, possible growler.
303	...do....	...do....	46 32 | 53 50		String field ice, length 1.2 miles, width 39 feet.
304	...do....	...do....	46 34 | 54 04		Drift ice approximately ½ square mile.
305	...do....	Canadian Department of Transport.	St. Lawrence River.		Quebec to Cape Salmon, some scattered ice.
306	...do....	...do....	North shore of Prince Edward Island.		Strip of ice along shore Malpaque to North Point with scattered strings extending eastward from North Point for 20 miles.
307	...do....	...do....	North Point to 20 miles southeast Miscou Island to New Brunswick coast to end of visibility 25 miles		Scattered loose ice.
308	...do....	...do....	Gaspe Bay.....		Loose ice in Gaspe Harbor and entrance to Bonaventure.
309	...do....	Nova Scotia.....	45 40 | 49 45		Radar target, possible berg.
310	Apr. 6	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle..		Sea ice.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
311	Apr. 6	Ice Patrol plane	Cape Spear to 2 miles east of Cape St. Francis to Baccalieu Island		Limits of pack ice, close pack along shore 500 yards width Cape Broyle to Cape Spear; St. John's Harbor, close pack but navigable; Conception Bay, close pack.
312	do	do	47 38	52 39	Growler.
313	do	do	47 41	52 42	3 bergs.
314	do	do	47 45	52 41	Berg.
315	do	do	47 50	52 44	2 bergs.
316	do	do	47 53	52 50	Do.
317	do	MSTS Office, St. John's, Newfoundland.	St. John's Harbor		Very loose pack ice.
318	do	Canadian Department of Transport.	St. Lawrence River.		Light scattered ice, Quebec to Cape Salmon.
319	do	do	Cape North, Cape Breton to 20 miles off Miscou Island		Loose ice along this line; close pack at Escuminac Point, New Brunswick.
320	do	TCA aircraft	48 10	52 57	Large berg.
321	do	Narsarsuak AB	BW-3 Fjord		Few bergy bits and growlers.
322	do	do	Seaward of BW-3 Fjord.		Few bergs.
323	Apr. 7	USCGC Casco	46 45	54 22	2 patches field ice 200 yards long by 100 yards and 1,000 by 300 yards.
324	do	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle		Sea ice.
325	do	USN aircraft	Hudson Strait and Baffin Bay.		Comprehensive report of pack ice.
326	do	Ice Patrol plane	1 mile southeast of Cape St. Francis		4 growlers.
327	do	do	Cape Spear to 3 miles east of Cape St. Francis		Limit of close to open pack ice.
328	do	USCGC Sebago	46 58	54 30	Northerly end line of brash and pan ice 100 to 200 yards wide. Line 205 degrees true extending limit of visibility 5 miles.
329	do	Canadian Department of Transport.	St. Lawrence River.		Considerable broken ice Saguenay River to Port Alfred.
330	Apr. 8	USN aircraft	Frobisher Bay to Resolution Island		Comprehensive report of ice conditions.
331	do	Canadian Department of Transport.	Chaleur Bay		Broken ice moving out.
332	do	do	North Point, Prince Edward Island to 20 miles southeast of Miscou Island		Scattered ice in this area close packed at Escuminac.
333	Apr. 9	Fort Hamilton	New Brunswick coast 7 miles east of Cape Race		String of loose ice 2 miles long.
334	do	do	Southeast of Cape Race		String ice.
335	do	Narsarsuak AB	BW-3 Fjord		Few growlers.
336	do	do	Seaward of BW-3		Few bergs.
337	do	Canadian Department of Transport.	Strait of Belle Isle		Loose ice south and west; close pack eastward.
338	Apr. 10	Torr Head	South coast of Newfoundland		Scattered field ice vicinity Lamb Rock; 3 miles to east and west and at least 5 miles to north and south.
339	do	Berylstone	East coast of Newfoundland		Field ice extends from 7 miles south of Cape Pine to 6 miles southeast of Cape Race, about 2 miles wide.
340	do	Canadian Department of Transport.	Gulf of St. Lawrence		Strip of ice 1 to 10 miles wide from Cape Bald to Richibucto.
341	do	Narsarsuak AB	BW-3 Fjord		Few bergy bits.
342	do	do	Seaward of BW-3		Few bergs and bergy bits and some pack ice.
343	Apr. 11	Fort Avalon	46 33	53 33	Some small growlers.
344	do	do	46 33	54 20	Large area of loose pack ice 6 miles east and west, and 1 mile north and south of this position.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
345	Apr. 11	Canadian Department of Transport.	Northumberland Strait and east coast of New Brunswick.	° / ° /	Strip of ice 1 to 2 miles wide extends north from Cape Bald to Richibucto. Heavy pack ice at Escuminac.
346	---do---	---do---	Chaleur Bay	-----	Ice in Campbellton and Dalhousie Harbors.
347	---do---	---do---	North coast of Prince Edward Island	-----	Narrow strip along coast between North Point and Malpeque.
348	Apr. 12	USC GLTS, Battle Harbor, Labrador.	Strait of Belle Isle	-----	Sea ice.
349	---do---	Unidentified aircraft	52 15	54 45	Berg.
350	---do---	---do---	52 30	54 55	Do.
351	---do---	---do---	53 00	54 00	Do.
352	---do---	---do---	52 45	53 30	Do.
353	Apr. 13	USC GLTS, Battle Harbor, Labrador.	Strait of Belle Isle	-----	Sea ice.
354	---do---	MSTS Office, St. John's, Newfoundland.	Approaches to St. John's Harbor	-----	Some scattered field ice.
355	---do---	Ice Patrol plane	{ Tor Bay to 48 02	{ 52 48	{ Limits of field ice.
356	---do---	---do---	East coast Avalon Peninsula	-----	Conception and Trinity Bays, Newfoundland 75 percent covered with open to close pack.
357	---do---	---do---	Trinity Bay, Newfoundland	-----	2 bergs.
358	---do---	---do---	Conception Bay, Newfoundland.	-----	3 bergs.
359	---do---	---do---	do	-----	5 growlers.
360	---do---	---do---	47 57	52 53	Growler.
361	---do---	---do---	47 58	52 49	Berg.
362	---do---	---do---	48 06	52 48	Do.
363	---do---	---do---	48 08	52 51	Do.
364	---do---	---do---	48 13	52 55	Do.
365	---do---	---do---	48 16	52 53	Growler.
366	---do---	---do---	48 37	52 30	Berg.
367	---do---	---do---	48 43	52 09	Growler.
368	---do---	---do---	48 44	51 38	Berg.
369	---do---	---do---	48 48	52 05	Growler.
370	---do---	---do---	49 00	51 08	Berg.
371	---do---	---do---	{ Cape Bonavista to 3 miles north to 8 miles east Cape Frels	{ to 50 30	{ Limits of pack ice with close pack along shore Cape Bonavista to Cape Fogo. North of Cape Fogo pack is open with polynas.
372	---do---	---do---	thence northwest 47 45	53 33	Berg aground.
373	---do---	---do---	47 49	53 30	Do.
374	---do---	---do---	Trinity Bay	-----	5 bergs.
375	---do---	---do---	48 06	52 48	Berg (same as 362).
376	---do---	---do---	Grates Point	-----	Berg and growler aground.
377	---do---	---do---	48 49	52 52	Berg.
378	---do---	---do---	Radius of 8 miles of Cape Bonavista	-----	6 bergs and 4 growlers.
379	---do---	---do---	48 42	51 38	Small berg (same as 368).
380	---do---	---do---	48 45	52 10	Growler (same as 367).
381	---do---	---do---	48 48	52 18	Growler (same as 369).
382	---do---	---do---	48 49	52 38	Do.
383	---do---	---do---	49 00	51 08	Berg (same as 370).
384	---do---	---do---	Cape Bonavista	-----	10 bergs and 9 growlers.
385	---do---	---do---	48 10	53 10	2 growlers.
386	---do---	---do---	2 mile radius 7 miles southeast Cape Frels	-----	7 bergs and 2 growlers.
387	---do---	---do---	10 miles east Cape Frels	-----	3 bergs.
388	---do---	---do---	49 15	51 22	Berg.
389	---do---	---do---	49 24	53 30	Berg.
390	---do---	---do---	49 26	53 08	Do.
391	---do---	---do---	49 30	53 13	Do.
392	---do---	---do---	49 30	53 30	Do.
393	---do---	---do---	49 32	53 52	2 growlers.
394	---do---	---do---	49 37	53 42	2 bergs.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
395	Apr. 13	Ice Patrol plane.....	{ Between latitudes 49 40N | 50 10N and longitudes 53 00W | 54 00W }		18 bergs and 21 growlers in this area.
396	...do...	...do.....	49 55	54 10	Berg.
397	...do...	...do.....	50 03	54 12	Do.
398	Apr. 14	Canadian Department of Transport.	Strait of Belle Isle.		Close pack ice Newfoundland side.
399	...do...	Narsarsuaq AB.....	Seaward of BW-3.		Few small bergs and growlers.
400	Apr. 15	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
401	...do...	Canadian Department of Transport.	Northumberland Strait.		Only known ice liable to obstruct navigation is located between lines: Tormentine to Scacow Head and West Point, Prince Edward Island and Richibucto. Within this area 75 percent loose ice moving southward.
402	...do...	...do.....	Miramichi Bay....		5 percent ice off Point Escuminae; inner bay loose ice.
403	Apr. 16	BOAC aircraft.....	East coast Avalon Peninsula.		3 large bergs near Funk Island.
404	...do...	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
405	...do...	Fort Hamilton.....	East coast Avalon Peninsula.		2 bergs, 1 vicinity Ferryland Head, and other 1 mile south Renewse Head, both apparently grounded.
406	...do...	Narsarsuaq AB.....	BW-3 Fjord.....		3 growlers, 1 berg, and few bergy bits.
407	...do...	...do.....	Seaward of BW-3.		Few bergs, many growlers, some bergy bits and pack ice.
408	...do...	Canadian Department of Transport.	Northumberland Strait.		Eastern limits of field ice at Victoria, Prince Edward Island.
409	Apr. 17	...do.....	Gulf of St. Lawrence.		All routes and ports Gulf and River St. Lawrence clear except western part of Northumberland Strait.
410	...do...	USNS Jose Valdez.....	46 54	52 54	Berg (same as 405).
411	...do...	...do.....	46 58	52 52	Do.
412	...do...	...do.....	47 00	52 52	Do.
413	...do...	Ice Patrol plane.....	Cape St. Francis...		Loosely scattered strings extend from Cape St. Francis to eastern limit of 52°00' W. and southern limit of 47°40' N.; St. John's Harbor and approaches clear; Conception Bay clear.
414	...do...	...do.....	Ferryland Head, Avalon Peninsula.		2 bergs aground (same as 405).
415	...do...	...do.....	Conception Bay....		4 growlers and 6 bergs.
416	...do...	...do.....	Tor Bay.....		Berg aground.
417	...do...	...do.....	47 55	52 35	4 growlers.
418	...do...	...do.....	48 06	52 48	Berg (same as 362).
419	...do...	...do.....	48 15	52 55	2 bergs.
420	...do...	...do.....	{ 48 45 to 48 55 | 52 10 thence northwest }		Limits of open pack ice.
421	...do...	...do.....	Tor Bay.....		Growler aground (same as 416).
422	...do...	...do.....	Conception Bay....		2 bergs aground.
423	...do...	...do.....	Grates Point.....		Berg aground.
424	...do...	...do.....	South end Baeca-lieu Island.		Berg aground (same as 362).
425	...do...	...do.....	48 12	52 50	Berg.
426	...do...	...do.....	Cape Bonavista...		3 bergs aground.
427	...do...	...do.....	48 37	52 51	2 bergs.
428	...do...	...do.....	48 47	52 53	4 bergs.
429	...do...	...do.....	48 56	51 56	Berg.
430	...do...	...do.....	48 56	52 50	Do.
431	...do...	...do.....	49 00	52 10	Do.
432	...do...	...do.....	49 16	50 31	Berg (same as 370).
433	Apr. 18	Canadian Department of Transport.	Gulf of St. Lawrence.		Conditions same as reported before.
434	Apr. 19	...do.....	...do.....		No change since last report.
435	...do...	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
436	...do...	TWA aircraft.....	49 23	50 50	Berg 60 feet high.
437	...do...	USCGC Castle Rock.	46 44	54 15	Numerous growlers.
438	...do...	Unidentified aircraft.	49 58	50 44	Medium to large berg.
439	Apr. 20	L'Aventure.....	Renewse Head.....		Small berg (same as 405).
440	...do...	...do.....	Black Head.....		Berg (same as 405).
441	...do...	USCGLTS, Battle Harbor.	Strait of Belle Isle.		Sea ice.
442	...do...	USN aircraft.....	48 42	50 16	Berg (same as 370).
443	...do...	...do.....	49 40	50 28	Berg.
444	...do...	Ice Patrol plane.....	46 55	52 54	Berg (same as 405).
445	...do...	...do.....	46 58	52 55	Do.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
446	Apr. 20	Canadian Department of Transport.	Gulf of St. Lawrence.		All Gulf routes clear except ice in western part of Northumberland Strait.
447	..do.	PAA aircraft.	49 40	51 30	Berg.
448	Apr. 21	Canadian Department of Transport.	Point Amour, Gulf of St. Lawrence.		Heavy close pack ice with 4 bergs.
449	Apr. 22	Unidentified aircraft.	Cape Bonavista		6 or 7 bergs in vicinity.
450	..do.	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
451	..do.	Canadian Department of Transport.	Gulf of St. Lawrence.		Only ice in gulf scattered strings along P. E. I. coast westward from Summerside.
452	..do.	..do.	Pt. Amour, Strait of Belle Isle.		5 bergs in sight.
453	..do.	Ice Patrol plane.	Baccalieu Island.		5 bergs, 1 growler.
454	..do.	..do.	Conception Bay.		7 growlers, 4 bergs.
455	..do.	..do.	48 30	51 30	2 small growlers.
456	..do.	USNS Valdez.	47 00	52 53	2 bergs (same as 405).
457	..do.	..do.	46 54	53 54	Berg (same as 405).
458	..do.	Narsarsuak AB.	BW-1 Fjord.		Open water to 12 miles south.
459	..do.	..do.	BW-3 Fjord.		Few growlers, patches of ice.
460	..do.	..do.	Seaward of BW-3 Fjord.		Few bergs, close pack ice.
461	Apr. 23	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle.		Sea ice.
462	..do.	USN aircraft.	48 29	52 25	Medium sized berg and 3 growlers.
463	..do.	MATS aircraft.	46 54	52 55	Berg (same as 405).
464	..do.	Luksefjell.	48 33	49 18	Berg and growler (same as 370).
465	..do.	Ice Patrol plane.	48 28	52 27	Berg (same as 462).
466	..do.	..do.	Cape Bonavista.		11 bergs in vicinity.
467	..do.	..do.	48 48	52 38	Berg.
468	..do.	..do.	49 00	52 14	Growler.
469	..do.	..do.	49 03	52 18	Do.
470	..do.	..do.	49 18	51 37	Do.
471	..do.	..do.	49 19	52 33	Do.
472	..do.	..do.	49 20	51 40	Do.
473	..do.	..do.	49 21	51 14	Do.
474	..do.	..do.	50 08	55 30	Large berg.
475	..do.	USCGC Bibb.	49 13	50 51	Medium sized berg (same as 435).
476	..do.	Canadian Department of Transport.	Gulf of St. Lawrence.		No change since report of 22d.
477	..do.	Narsarsuak AB.	BW-1 Fjord.		Open water to 12 miles south; heavy pack ice beyond this point.
478	..do.	..do.	BW-3 Fjord.		Close pack ice in fjord and seaward.
479	Apr. 24	USCGC Bibb.	50 00	51 00	Radar target, presumed berg.
480	..do.	USCGLTS, Battle Harbor.	Strait of Belle Isle.		Sea ice.
481	..do.	TWA aircraft.	49 20	50 25	Berg (same as 435).
482	..do.	USCGC Bibb.	52 55	51 36	Heavy brash ice.
483	..do.	US Air Force.	Frobisher Bay to Resolution Island.		Comprehensive report of ice conditions.
484	..do.	Canadian Department of Transport.	Gulf of St. Lawrence.		All routes to Great Lakes and local gulf ports now clear of all ice except through Strait of Belle Isle.
485	..do.	..do.	Pt. Amour.		7 bergs in heavy open pack ice.
486	..do.	..do.	Belle Isle.		String of ice on Labrador side.
487	..do.	Narsarsuak AB.	BW-1 Fjord.		Clear to Narsak Pt; then bergy bits and heavy pack ice.
488	..do.	..do.	BW-3 Fjord.		Open to close pack ice; few bergs and close pack ice to seaward.
489	Apr. 25	Canadian Department of Transport.	Gulf of St. Lawrence.		No change since report of 22d.
490	Apr. 26	USCGC McCullough.	53 34	51 00	Growler.
491	..do.	S & WA aircraft.	49 50	51 10	Large berg.
492	..do.	Orion.	48 57	48 30	Large growler (same as 370).
493	..do.	Canadian Department of Transport.	Gulf of St. Lawrence.		No new information
494	..do.	Unidentified aircraft.	49 00	53 25	Large berg.
495	..do.	..do.	Southwest coast of Greenland.		Heavy concentration of pack ice from Simiutak to about 100 miles seaward.
496	..do.	Ice Patrol plane.	47 49	52 50	1 small berg and 2 growlers.
497	..do.	..do.	Conception Bay.		9 growlers.
498	..do.	..do.	Grates Point.		2 small bergs.
499	..do.	..do.	East coast Baccalieu Island.		2 small bergs and 1 growler.
500	..do.	..do.	48 11	51 50	Small berg.
501	..do.	..do.	48 21	52 26	Medium drydock berg and 12 growlers.
502	..do.	..do.	48 31	52 31	Medium pinnacle berg.
503	..do.	..do.	East coast of Cape Bonavista.		3 small bergs.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
504	Apr. 26	ice Patrol plane	Cape Bonavista		3 small bergs 5 to 10 miles north.
505	do	do	48 52	52 37	Medium drydock berg.
506	do	do	48 55	48 37	Small berg (same as 370).
507	do	USNS General H. R. Hodges.	48 02	50 27	3 growlers.
508	do	Unidentified aircraft	49 50	51 03	Large berg (same as 491).
509	do	KLM aircraft	50 00	51 00	Very large berg (same as 491).
510	do	Arthur Cross	Pouch Cove, Avalon Peninsula.		Large growler.
511	do	do	Cape St. Francis		Several small growlers ½ to 3 miles north
512	do	do	Conception Bay		2 growlers west shore.
513	do	USCGLTS, Battle Harbor.	Strait of Belle Isle		Sea ice.
514	do	Canadian Department of Transport.	Gulf of St. Lawrence.		All gulf routes and ports clear except Strait of Belle Isle.
515	do	Ice Patrol plane	48 20	51 55	Medium pinnacled berg and 12 growlers (same as 462).
516	do	do	49 45	51 07	Medium dome berg and 1 growler (same as 491).
517	do	do	Westward of a line from 50°45' N, 54°50' W. to 52°30' N, 55°20' W.		Limits of pack ice, ranging from open to close pack.
518	do	do	Strait of Belle Isle		Open pack ice extends west to Pt. Amour.
519	do	do	Vicinity Cape Bonavista.		8 bergs, 3 growlers.
520	do	do	48 44	52 20	Large drydock berg (same as 505).
521	do	do	49 33	51 53	Growler.
522	do	do	49 35	53 11	Berg.
523	do	do	49 41	52 45	Growler.
524	do	do	50 25	52 19	Do.
525	do	do	50 40	51 44	Berg.
526	do	do	Vicinity Groats Island.		2 bergs, 5 growlers.
527	do	do	51 33	54 07	Berg.
528	do	do	Strait of Belle Isle		3 bergs, 7 growlers.
529	do	do	52 10	51 43	Berg.
530	do	Narsarsuak AB	BW-1 Fjord		Close pack ice is 60 miles seaward from Simiutak Island.
531	Apr. 28	USCGLTS, Battle Harbor.	Strait of Belle Isle		Sea ice.
532	do	Narsarsuak AB	BW-1 Fjord		Close pack ice.
533	do	Canadian Department of Transport.	Gulf of St. Lawrence.		No new information.
534	Apr. 29	do	do		Do.
535	do	do	Point Amour		Heavy open pack ice; several bergs and growlers.
536	do	Narsarsuak AB	BW-1 Fjord		Small berg.
537	do	do	BW-3 Fjord		Close pack ice and few bergs.
538	Apr. 30	USAF aircraft	Davis Strait		Boundary of pack ice 15 miles east of Resolution Island.
539	do	Narsarsuak AB	BW-1 Fjord		Open pack ice.
540	do	do	BW-3 Fjord		Close pack ice with growlers; seaward close pack with bergs.
541	May 1	USN aircraft	Hamilton Inlet, Labrador.		Scattered patches field ice and growlers with several bergs and growlers to seaward. No pack ice to southeast.
542	do	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle		Sea ice.
543	do	Ice Patrol plane	Newfoundland		Numerous radar targets probable bergs between Cape St. Francis and Funk Island.
544	do	do	49 00	53 24	Medium pinnacled berg.
545	do	Canadian Department of Transport.	Gulf of St. Lawrence.		All routes river and gulf clear for navigation except Strait of Belle Isle
546	do	do	Strait of Belle Isle		At Belle Isle, clear in all direction except 2 mile wide string on Labrador side; at Point Amour, loose ice in sight all around.
547	do	Narsarsuak AB	BW-1 Fjord		Few small bergs.
548	do	do	BW-3 Fjord		Close pack ice in fjord to seaward.
549	May 2	Sagvat	48 00	49 35	Radar target, probable berg.
550	do	Bolivia	48 04	49 43	Radar target, possible ice.
551	do	Canadian Department of Transport.	Gulf of St. Lawrence.		All routes river and gulf clear for navigation except Strait of Belle Isle.
552	do	do	Point Amour, Gulf of St. Lawrence.		Close pack ice and 8 bergs.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
553	May 2	Ice Patrol plane.....	51 14	50 32	Large tabular berg.
554	..do..	..do..	Fogo Island.....		2 small bergs, 15 growlers within 15 miles northeast of Fogo Island.
555	..do..	..do..	51 42	52 59	Small berg.
556	..do..	..do..	51 43	52 34	Do.
557	..do..	..do..	51 47	51 54	Do.
558	..do..	..do..	51 47	52 25	Do.
559	..do..	..do..	51 47	53 55	1 small berg, 1 growler.
560	..do..	..do..	51 52	52 12	Small berg.
561	..do..	..do..	51 54	51 54	Do.
562	..do..	..do..	52 00	53 14	3 growlers.
563	..do..	..do..	52 00	53 53	Small berg.
564	..do..	..do..	52 19	52 10	2 small bergs.
565	..do..	..do..	Labrador coast.....		7 bergs, 15 growlers between 52°12' N. and 52°37' N.
566	..do..	..do..	52 25	55 10	12 growlers.
567	..do..	..do..	52 26	54 10	Small berg.
568	..do..	..do..	52 27	53 12	1 growler.
569	..do..	..do..	52 27	54 01	1 medium berg.
570	..do..	..do..	52 28	54 48	Small berg.
571	..do..	..do..	52 30	52 03	3 growlers.
572	..do..	..do..	52 30	52 21	Do.
573	..do..	..do..	Labrador.....		Loose strings of field ice extend 130 miles east of Labrador coast at 52°00' N. with occasional patches close pack ice.
574	..do..	..do..	Fogo Island.....		4 radar targets, probable bergs, 15 miles northeast of Fogo Island.
575	..do..	..do..	St. Lewis Sound.....		5 radar targets 45 to 90 miles east of St. Lewis Sound, probable bergs.
576	May 3	Orizia.....	47 52	52 55	Berg.
577	..do..	..do..	47 55	52 48	Do.
578	..do..	..do..	47 56	52 45	Do.
579	..do..	..do..	47 57	52 54	Do.
580	..do..	..do..	Conception Bay.....		Many growlers and pieces of ice at entrance of bay.
581	..do..	Ice Patrol plane.....	47 47	52 37	Small growler.
582	..do..	..do..	47 30	53 05	Growler.
583	..do..	..do..	47 50	52 52	Small berg.
584	..do..	..do..	Western Conception Bay.....		4 growlers, 2 bergs.
585	..do..	..do..	Cape St. Francis.....		Medium berg and small berg 5 miles to north.
586	..do..	..do..	48 06	52 33	Small berg.
587	..do..	..do..	48 09	52 26	Two pinnacled berg.
588	..do..	..do..	48 10	51 33	Large pinnacled berg and growler.
589	..do..	..do..	48 11	51 32	Disintegrating growler.
590	..do..	..do..	48 12	51 40	Small growler.
591	..do..	..do..	48 30	52 45	2 small bergs.
592	..do..	..do..	Cape Bonavista.....		4 bergs 10 miles eastward.
593	..do..	..do..	48 48	51 19	Berg (same as 491).
594	..do..	..do..	49 50	52 12	Growler.
595	..do..	..do..	Notre Dame Bay.....		Pack ice begins at Cape Freels and extends west close along shore into Notre Dame Bay.
596	..do..	..do..	Labrador.....		A belt of bergs, growlers, and scattered field ice parallels Labrador coast from Cape St. Charles to Hamilton Inlet with the axis of the heaviest ice concentration lying about 50 miles offshore with approximately 150 bergs and 750 growlers in this belt. Scattered field ice extends up to 150 miles offshore at 52°40' N. A few bergs lie inshore of this belt.
597	..do..	..do..	Fogo Island.....		5 bergs, 5 to 15 miles northeast.
598	..do..	..do..	..do..		26 bergs in pack ice to north of Fogo Island and New World Island.
599	..do..	..do..	50 20	54 52	Small berg.
600	..do..	..do..	51 40	54 15	Do.
601	..do..	..do..	51 40	54 31	Do.
602	..do..	..do..	51 40	54 38	Do.
603	..do..	..do..	52 01	54 18	Do.
604	..do..	..do..	52 07	54 02	Do.
605	..do..	USCGC Unimak.....	48 12	51 54	Large berg, 241 feet high, 1,920 feet long, possibly grounded (same as 588).
606	..do..	..do..	48 03	51 33	Many growlers.
607	..do..	..do..	47 37	52 28	3 growlers.
608	May 4	USN aircraft.....	47 47	51 31	Berg (same as 588).
609	..do..	Canadian Department of Transport.	Gulf of St. Lawrence.		No change from report of May 2d.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
610	May 4	USCGC Unimak	47 34	52 38	Growler (same as 583).
611	do	do	47 48	51 32	Large berg (same as 588).
612	do	do	47 51	51 52	Small tabular berg (same as 586).
613	do	USN aircraft	Notre Dame Bay		Close pack ice to Cape Bauld.
614	do	do	Strait of Belle Isle		Open from Cape Norman to Eddies Cove thence pack ice to Amour Point. Open pack ice around Belle Isle.
615	do	do	Labrador		Open water from shore to 20 miles seaward from Battle Harbor to Island of Ponds. Farther seaward scattered ice with many bergs and growlers.
616	do	do	do		Open pack ice from Island of Ponds to Cape Porcupine.
617	May 5	USCGLTS, Battle Harbor, Labrador.	Strait of Belle Isle		Sea ice.
618	do	Ice Patrol plane	46 35	51 51	Radar target possible berg.
619	do	do	46 40	51 49	Do.
620	do	do	46 43	51 02	Do.
621	do	do	46 48	51 26	2 radar targets, possible bergs.
622	do	do	46 49	51 10	Do.
623	do	do	47 04	51 38	Radar target, possible berg.
624	do	do	47 40	51 18	Do.
625	do	do	48 02	50 40	Do.
626	do	do	Conception Bay		Berg aground just north of Bell Island.
627	do	do	do		Berg and growler in bay.
628	do	do	Cape St. Francis		2 bergs and growler aground.
629	do	do	Grates Point		2 bergs aground.
630	do	do	Bay Verde		Do.
631	do	do	Trinity Bay		Berg and growler aground at Northern Point.
632	do	do	48 28	52 43	2 bergs.
633	do	Blue Foam	46 45	52 10	Berg (same as 462).
634	do	BOAC aircraft	49 28	53 35	1 very large berg and 2 small bergs.
635	do	USN aircraft	Strait of Belle Isle		Strings of field ice on Southern shore from entrance to Barbe Bay, and patches past Savage Point.
636	do	do	White Bay		Open pack ice along Southern shore.
637	do	do	Notre Dame Bay		Close pack ice in northern part; bergs and growlers in southern part to Fogo Island.
638	May 6	Mormacdawn	47 45	52 07	Small berg.
639	do	Unidentified aircraft	49 48	50 25	Large berg (same as 525).
640	do	Ice Patrol plane	46 13	52 10	Medium berg (same as 462).
641	do	do	47 03	52 52	Small berg.
642	do	do	47 18	52 47	Do.
643	do	do	46 25	52 30	Radar target, possible berg.
644	do	do	46 49	52 48	Do.
645	do	do	Area bounded by latitudes 46°40' N. and 47°10' N. and longitudes 51°00' W. and 52°00' W.		8 radar targets, possible bergs.
646	May 7	Nova Scotia	Avalon Peninsula		Several small bergs aground between Ferryland Head and Bay Bulls.
647	do	Beaverbrae	46 41	47 24	Stationary radar target, possible berg.
648	do	Narsarsuak-AB	BW-1 Fjord		Close pack ice with bergs to 40 miles seaward.
649	do	do	BW-3 Fjord		Open pack ice and a few bergs.
650	May 8	Beaverbrae	46 25	51 30	Stationary radar target.
651	do	Unidentified USN vessel	47 39	52 18	Berg.
652	do	do	47 41	52 06	Do.
653	do	TWA aircraft	49 05	53 20	2 large bergs.
654	do	Narsarsuak AB	BW-1 Fjord		Few bergs and many growlers.
655	do	do	BW-3 Fjord		Open pack ice; close pack ice with few small bergs to seaward.
656	do	Ice Patrol plane	47 32	53 02	Berg.
657	do	do	46 09	47 55	Radar target, possible berg.
658	do	do	46 33	50 27	Do.
659	do	do	46 38	50 30	Do.
660	do	do	46 47	51 03	Do.
661	do	do	47 00	51 47	Do.
662	do	do	47 02	51 25	Do.
663	do	do	47 20	49 50	Do.
664	do	do	47 25	49 11	Do.
665	do	do	47 30	49 12	Do.
666	May 9	USNS Sgt. Jonah E. Kelley	46 49	52 48	Nothing sighted visually or by radar this position where radar target, possible berg had been reported.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
667	May 9	USN aircraft	Notre Dame Bay		Open pack ice with bergs and growlers.
668	do	do	White Bay		Clear of field ice, but bergs.
669	do	do	White Bay to Belle Isle		Open and free of field ice.
670	do	do	Straits of Belle Isle		Loose strings of field ice in middle of strait.
671	May 10	do	Hamilton Inlet to Cape Harrison		Close pack ice 15 miles to seaward with bergs.
672	do	Manchester Shipper	45 52	52 06	Berg (same as 462).
673	do	do	45 58	51 53	Berg and growler (same as 462).
674	do	do	46 11	52 50	Radar target, possible berg.
675	do	Seaboard Trade	46 05	52 20	Radar target, presumably a berg.
676	May 11	USC GLTS, Battle Harbor	Straits of Belle Isle		Sea ice.
677	do	Caxton	47 48	51 50	Berg and growler (same as 588).
678	do	do	47 40	51 55	Berg.
679	do	do	47 40	52 38	Small berg.
680	do	BOAC aircraft	49 00	53 00	2 bergs.
681	do	do	49 28	53 30	Berg.
682	do	do	49 50	53 00	Do.
683	do	Gardenia	Bonavista Bay		5 bergs.
684	do	do	49 11	53 30	2 bergs.
685	do	do	49 28	53 36	2 bergs.
686	do	do	49 24	53 36	1 berg.
687	May 12	Oakby	50 16	50 00	Berg (same as 553).
688	do	Prins Hendrick Willem	45 58	50 00	Radar target, possible berg.
689	do	Fort Hamilton	47 13	52 40	Berg, 110 feet high, 240 feet long.
690	do	USCGC Coos Bay	47 13	52 43	Berg (same as 689).
691	do	do	47 45	51 58	Berg (same as 678).
692	do	Ice Patrol plane	47 11	52 36	Berg (same as 689).
693	do	do	47 38	51 48	Berg (same as 678).
694	do	do	47 38	51 35	Small berg.
695	do	do	47 43	51 26	Large berg (same as 588).
696	do	do	47 43	52 40	Berg aground.
697	do	do	47 49	52 41	Do.
698	do	do	48 07	52 50	Do.
699	do	do	Conception Bay		5 bergs and 1 growler.
700	do	do	47 45	51 28	Medium pinnacled berg (same as 588).
701	do	do	47 45	51 43	Growler (same as 694).
702	do	do	47 45	51 53	Medium dome berg (same as 678).
703	do	do	48 01	51 21	Growler.
704	do	do	48 10	51 08	Berg (same as 491).
705	do	do	48 12	51 43	Berg.
706	do	do	48 18	52 09	Medium dome berg.
707	do	do	48 25	52 47	Medium berg.
708	do	do	Trinity Bay		6 bergs, 2 growlers.
709	do	do	Conception Bay		3 bergs, 8 growlers.
710	do	do	Cape St. Francis		4 small bergs aground.
711	do	do	Grates Point		2 small bergs aground.
712	do	USCGC Coos Bay	47 39	51 47	Small berg (same as 694).
713	do	do	47 40	51 36	Berg (same as 588).
714	do	do	48 08	51 09	Berg (same as 491).
715	do	USN aircraft	48 13	51 35	Large pinnacled berg (same as 705).
716	May 13	USCGC Coos Bay	49 37	50 17	Radar target, believed berg.
717	do	do	49 47	50 22	Do.
718	do	USCGC Ingham	47 06	52 37	Growler.
719	do	Stavangerfjord	47 42	51 34	Large berg (same as 588).
720	do	Hemsefjell	47 42	51 22	Large berg surrounded by several growlers (same as 588).
721	do	USCGC Ingham	47 40	51 52	Berg (same as 678).
722	do	do	47 41	51 27	Large berg and growler (same as 588).
723	do	do	47 42	51 40	Berg (same as 694).
724	do	Stavangerfjord	47 07	52 40	Berg (same as 689).
725	do	USCGC Ingham	47 58	51 16	Radar target, probable growler (same as 703).
726	do	do	48 07	51 09	Small berg (same as 491).
727	do	Ice Patrol plane	48 09	52 16	Berg (same as 706).
728	do	do	48 16	52 46	Berg (same as 707).
729	do	do	Conception Bay		5 bergs, 3 growlers.
730	do	do	Trinity Bay		Berg.
731	do	do	Baccallen Island		2 bergs aground inshore.
732	do	USCGC Ingham	48 21	50 40	Stationary radar target.
733	do	USNS Valdez	47 01	52 43	Berg and growler (same as 689).
734	do	Sagkat	46 59	52 45	Do.
735	do	Narsarsuaq AB	BW-1 Fjord		Close pack ice.
736	do	do	BW-3 Fjord		Few growlers and patches drift ice.
737	May 14	Cairngowan	47 22	51 24	Growler.
738	do	Mormacelm	46 53	52 49	Large berg (same as 689).
739	do	Perth	46 51	52 43	Large growler.
740	do	Raunala	46 48	52 49	Small berg (same as 739).
741	do	Chestatee	46 42	52 54	Berg (same as 739).
742	do	do	46 53	52 49	Berg (same as 689).

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
743	May 14	Narsarsuaq AB.....	BW-1 Fjord.....		Close pack ice with many bergs and growlers.
744	..do..	..do..	BW-3 Fjord.....		Close pack ice with few bergs and growlers.
745	..do..	Unidentified aircraft.....	49 30	53 30	Large berg.
746	..do..	..do..	49 37	53 40	8 small bergs.
747	May 15	Cape Race radio.....	46 39	52 58	Large berg (same as 689).
748	..do..	Agua Santa.....	47 15	51 33	Large berg (same as 588).
749	..do..	..do..	47 17	51 33	Large growler.
750	..do..	Caxton.....	47 47	52 15	Berg (same as 706).
751	..do..	Durham Trader.....	47 42	49 55	2 small stationary radar targets.
752	..do..	..do..	48 16	52 46	Berg.
753	..do..	Narsarsuaq AB.....	BW-1 Fjord.....		Close pack ice with bergs and growlers.
754	..do..	..do..	BW-3 Fjord.....		3 small bergs and many growlers.
755	May 16	Caxton.....	48 42	52 26	Growler.
756	..do..	..do..	48 46	52 44	Do.
757	..do..	..do..	48 48	52 30	Do.
758	..do..	..do..	48 50	52 23	Do.
759	..do..	..do..	48 52	52 29	Do.
760	..do..	..do..	49 08	53 14	5 bergs.
761	..do..	..do..	49 10	52 56	2 bergs.
762	..do..	..do..	49 13	53 07	Berg.
763	..do..	..do..	49 15	53 05	Do.
764	..do..	..do..	A line from 49 00 to 52 28		Small growlers and pieces of ice dangerous to navigation.
			49 10	52 56	
765	..do..	Prins Alexander.....	52 18	52 54	Small bergs and many pieces of ice. Strings of field ice 5 miles long.
766	..do..	Caxton.....	49 54	54 00	
			49 54	54 19	
767	..do..	..do..	50 06 to 54 26 thence southwest		Limits of pack ice in Notre Dame Bay;
768	..do..	..do..	49 49	54 02	Large berg.
768	..do..	..do..	49 44	54 59	Do.
770	..do..	Cape Race radio.....	46 40	51 45	2 large bergs (same as 588).
771	..do..	..do..	46 40	52 55	Large berg (same as 689).
772	..do..	Zerda.....	47 02	51 50	Large berg and several small pieces. (same as 588).
773	..do..	Beaverlodge.....	Cape Race.....		Radar target 4½ miles east of Cape Race, believed berg (same as 689).
774	..do..	Dalton Hall.....	46 59	51 28	Large berg and 3 small growlers (same as 588).
775	May 17	Prins Alexander.....	51 46	55 10	Large berg and many growlers and pieces.
776	..do..	..do..	51 51	54 49	Berg.
777	..do..	..do..	51 55	54 49	Growler and pieces.
778	..do..	..do..	51 56	54 37	Berg.
779	..do..	..do..	51 59	54 39	Small growlers.
780	..do..	..do..	52 00	54 26	Growler and small pieces.
781	..do..	..do..	52 02	54 04	Berg.
782	..do..	..do..	52 04	54 15	Do.
783	..do..	..do..	52 08	54 35	Large berg.
784	..do..	..do..	52 09	53 48	Growler.
785	..do..	..do..	51 46	55 19	Large berg, small growler and pieces.
786	..do..	..do..	51 51	54 49	Berg.
787	..do..	..do..	51 55	54 49	Berg and growler.
788	..do..	..do..	51 56	54 38	Berg.
789	..do..	..do..	51 59	54 39	Do.
790	..do..	..do..	52 00	54 24	Growler and many pieces.
791	..do..	..do..	52 02	54 05	Berg.
792	..do..	..do..	52 04	54 15	Growlers.
793	..do..	..do..	52 08	54 35	2 large bergs.
794	..do..	..do..	Straits of Belle Isle..		25 bergs and many growlers between Point Amour and Belle Isle.
795	..do..	..do..	..do..		11 radar targets, probable bergs between Point Amour and Rich Point.
796	..do..	..do..	50 53	57 53	Growler.
797	..do..	..do..	50 59	57 56	Do.
798	..do..	..do..	51 00	57 43	Berg.
799	..do..	Empress of France.....	46 32	53 13	Berg (same as 689).
800	..do..	Port Said.....	52 00	54 30	Bergs and growlers extend from this position to Straits of Belle Isle.
801	..do..	Empress of Scotland.....	46 36	53 16	Berg (same as 689).
802	..do..	..do..	46 34	53 17	5 growlers.
803	..do..	USCGT S, Battle Harbor.....	Straits of Belle Isle..		Clear of field ice.
804	..do..	Poseidon.....	46 20	54 18	Berg (same as 689).
805	..do..	Empress of Scotland.....	46 52	51 55	Low berg (same as 678).
806	..do..	..do..	46 53	52 11	Berg (same as 588).
807	..do..	..do..	47 24	51 13	Berg (same as 491).

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
808	May 17	US Air Force.....	Argentina, New- foundland.	o / o /	3 bergs bearing 138° magnetic from Argentina 70 to 85 miles distant.
			Notre Dame Bay to		
			49 50 | 55 30		
			50 00 | 55 00		
810	...do....	USN aircraft.....	50 00 | 54 35		Southern limit of Newfoundland pack ice. Waters east and north generally ice free to 54°00' N. except for widely scattered bergs and growlers.
			50 30 | 54 40		
			50 25 | 54 15		
			49 40 | 53 40		
811	...do....	...do.....	Indian Harbor to		Scattered belts 12 to 29 miles wide.
			Cape Harrison		
			54 40 | 56 33		
			54 15 | 57 10		
812	...do....	...do.....	54 00 | 57 00		Limits of close pack ice off Labrador.
			to		
			West Coast George Island to		
813	May 18	Dalton Hall.....	54 27 | 57 25		Berg and growler (same as 525).
814	...do....	Ice Patrol plane.....	47 49 | 50 14		Radar target, possible berg.
815	...do....	...do.....	46 27 | 53 00		Small growler (same as 694).
816	...do....	...do.....	46 45 | 52 09		Large berg (same as 588).
817	...do....	...do.....	46 48 | 52 19		Large and small growler (same as 678).
818	...do....	...do.....	46 49 | 51 55		Medium berg (same as 705).
819	...do....	...do.....	47 05 | 52 10		Small berg (same as 706).
820	...do....	...do.....	47 19 | 52 37		Small berg (same as 491).
821	...do....	...do.....	47 20 | 51 15		Small berg.
822	...do....	...do.....	47 44 | 52 42		Large berg.
			Entrance to Holy- rood Bay.		
823	...do....	...do.....	Conception Bay.....		Berg between Bell and Kelly Islands.
824	...do....	...do.....	47 44 | 52 42		Small berg aground.
825	...do....	...do.....	Pouch Cove.....		Growler aground.
826	...do....	...do.....	West side Concep- tion Bay.		3 bergs and growler.
827	...do....	...do.....	48 00 | 52 50		Berg.
828	...do....	...do.....	Grates Point.....		Small berg aground.
829	...do....	...do.....	Entrance Trinity Bay.		8 growlers.
830	...do....	...do.....	48 27 | 51 40		Berg.
831	...do....	...do.....	48 32 | 52 50		Do.
832	...do....	...do.....	East coast Bona- vista Bay.		4 bergs and growler aground.
			Cape Bonavista to		
833	...do....	...do.....	Cape Freels		14 bergs and numerous growlers.
			Newfoundland- coast at 49 00N to		
			north close along shore around		
834	...do....	...do.....	Cape Freels to Fogo Island thence to west into Notre Dame Bay.		Limits of close pack ice.
835	...do....	...do.....	49 07 | 50 25		Berg (same as 553).
836	...do....	...do.....	49 21 | 53 38		Berg.
837	...do....	...do.....	49 30 | 53 40		Do.
838	...do....	...do.....	49 35 | 53 50		Berg and 2 growlers.
839	...do....	...do.....	49 41 | 53 43		Berg.
840	...do....	...do.....	49 55 | 54 05		Do.
841	...do....	...do.....	50 03 | 53 16		Do.
842	...do....	...do.....	50 08 | 53 37		Do.
843	...do....	...do.....	50 37 | 52 48		Do.
			Fogo Island to		
844	...do....	...do.....	Cape St. John		8 bergs.
845	...do....	...do.....	Bonavista Bay.....		9 bergs.
846	...do....	...do.....	Vicinity Cape Bon- avista.		3 bergs.
847	...do....	...do.....	Trinity Bay.....		2 bergs.
848	...do....	USCG aircraft.....	Twillingate to Belle Isle.		Numerous bergs and growlers.
849	...do....	...do.....	Strait of Belle Isle..		No ice around Battle Harbor. 3 bergs just west of Belle Isle.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
850	May 18	USCG aircraft	Notre Dame Bay		Pack ice in Notre Dame Bay extends to northern limit at Gull Island.
851	do	USN Aircraft	47 00	52 00	Berg 50 feet high (same as 705).
852	do	USN vessel	46 47	52 27	Large berg with numerous growlers (same as 588).
853	do	do	47 03	52 16	Berg (same as 705).
854	do	USN aircraft	Notre Dame Bay		Close pack ice in bay.
855	do	do	Notre Dame Bay to St. Michaels Bay.		No ice along coast except few bergs and growlers.
856	May 19	USCGC Matagorda	48 55	50 05	Large berg (same as 553).
857	do	do	48 05	51 31	Small radar targets, possible growlers.
858	do	do	47 12	52 42	Small berg (same as 706).
859	do	do	46 42	52 18	Medium berg (same as 583).
860	do	Wanstead	47 17	51 34	Growlers.
861	do	do	47 01	52 21	Berg (same as 705).
862	do	do	46 48	52 35	Large berg (same as 588).
863	do	American Counselor	46 44	52 15	Growlers (same as 694).
864	do	do	46 48	52 05	Small berg (same as 678).
865	do	do	46 48	52 30	Large berg (same as 588).
866	do	Elysia	46 37	53 21	Large berg (same as 689).
867	do	do	46 43	52 32	Growler.
868	do	do	46 48	52 35	Large berg (same as 588).
869	do	Gluecauf	48 49	50 18	Small berg (same as 553).
870	do	Imperial Frederickton	46 49	52 36	Berg (same as 588).
871	do	do	47 11	52 48	Berg (same as 706).
872	do	do	47 00	52 26	Bergy bits.
873	do	Belfri	47 48	50 20	Berg (same as 525).
874	do	Elysia	46 46	52 18	3 growlers (same as 694).
875	do	do	46 47	52 11	Small berg and growler (same as 678).
876	do	Narsarssuaq AB	BW-1 Fjord		Bergs and growlers.
877	do	do	BW-3 Fjord		Pack ice and growlers in fjord; seaward to 100 miles, bergy bits and growlers. Close pack ice extends out beyond 100 miles.
878	do	Joao Marti	48 35 54 20	50 08 57 30	Berg (same as 553).
879	do	USN aircraft	West tip to George Island 54 30 55 20 55 25 55 30 55 50	56 40 56 45 58 15 57 25 59 20	Limits of pack ice off Labrador coast.
880	do	do	Labrador		Fish Cove to Cape Porcupine, Sandwich Bay and Cartwright free of ice. Comprehensive ice report.
881	do	do	East coast of Greenland.		
882	May 20	USCGC Bibb	46 48	52 42	Large pinnacled berg, 165 feet high and 2 small growlers (same as 588).
883	do	do	46 48	52 42	Large pinnacle separated from main berg (same as 588).
884	do	do	47 00	52 32	Large and small growler (same as 705).
885	do	do	47 10	52 46	Berg (same as 706).
886	do	Baron Geddes	48 43	50 03	Berg (same as 553).
887	do	City of Perth	47 14	51 47	Berg (same as 491).
888	do	do	46 44	52 50	Berg (same as 588).
889	do	Cape Race radio	Cape Race Gull Island		Large berg 9 miles east (same as 588).
890	do	Imperial Fredericton	49 15 49 53 50 10	53 25 53 42 53 42	Several bergs west of this line.
891	do	Idefjord	51 52	55 13	Berg.
892	do	do	51 52	55 14	Do.
893	do	do	51 52	55 15	Do.
894	do	do	51 53	55 16	Do.
895	do	do	51 55	55 08	Do.
896	do	do	51 56	55 09	Do.
897	do	do	52 04	54 47	Do.
898	do	do	52 04	54 48	Do.
899	do	do	52 32	54 25	Do.
900	do	do	52 34	53 19	Do.
901	do	Tadamsterdam	48 33	49 45	Berg and growler (same as 553)

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
902	May 20	Ice Patrol plane	Cape Freels to		Pack ice close along shore.
903	do	do	Notre Dame Bay.	50 00 53 06	A 5 mile wide patch of field ice extends to north from this position.
904	do	do	50 00 54 00		} Loose strings of field ice along this line.
			50 30 54 00		
905	do	do	Cape Freels to		} 38 bergs and 24 growlers within 15 miles of shoreline.
			Fogo Island		
906	do	do	50 00 54 00		Berg.
907	do	do	50 06 54 11		Do.
908	do	do	50 28 53 27		Do.
909	do	do	50 35 53 43		Do.
910	do	do	50 44 54 20		Do.
911	do	do	50 46 54 36		Do.
912	do	do	50 56 54 26		Do.
913	do	do	51 03 54 13		Growler.
914	do	do	51 04 53 23		Berg.
915	do	do	51 06 51 54		Do.
916	do	do	51 12 54 26		4 growlers.
917	do	do	51 15 51 47		Berg.
918	do	do	51 20 54 20		Do.
919	do	do	51 23 53 50		Do.
920	do	do	51 30 51 53		Berg and growler.
921	do	do	51 35 53 49		Berg.
922	do	do	51 37 53 58		Growler.
923	do	do	Belle Isle		30 bergs and 25 growlers within 30 miles of Belle Isle and Cape Bauld.
924	do	do	52 17 53 29		Berg.
925	do	do	52 20 54 10		Do.
926	do	do	52 33 53 55		Growler.
927	do	do	52 45 54 28		2 bergs.
928	do	do	53 08 54 16		Berg.
929	do	Narsarsuak AB	BW-1 Fjord		Bergs and growlers.
930	do	do	BW-3 Fjord		Close pack ice with bergs and growlers. to seaward.
931	May 21	USCGC Chambers	46 41 52 11		Small berg (same as 678).
932	do	HMCS Swansea	47 11 52 45		Berg (same as 706).
933	do	do	46 45 52 50		Berg (same as 588).
934	do	do	46 53 52 44		Berg (same as 705).
935	do	Cape Race Radio	Cape Race		Berg 9 miles to east (same as 588).
936	do	do	do		Growler 1 mile off shore.
937	do	USN aircraft	47 15 51 42		Small growler (same as 491).
938	do	USCGC Chambers	47 06 51 38		Berg and 3 growlers (same as 491).
939	do	Atlantic	51 52 54 23		Growler.
940	do	do	51 57 54 45		Berg and 12 growlers.
941	do	do	51 58 54 17		Growler.
942	do	do	52 13 55 00		Berg.
943	do	do	52 16 53 38		Do.
944	do	USN aircraft	Labrador coast		Pack ice extends 50 miles off coast to southern boundary at Cape Harrison.
945	do	Ice Patrol plane	Trepassey Bay		Berg and growler (same as 689).
946	do	do	46 30 53 00		3 growlers.
947	do	do	46 35 52 45		Berg (same as 678).
948	do	do	46 37 52 31		Growler.
949	do	do	46 37 53 04		Berg and 2 growlers (same as 588).
950	do	do	46 57 52 10		Berg (same as 491).
951	do	do	46 57 52 48		Berg (same as 705).
952	do	do	47 03 52 40		Berg (same as 706).
953	do	do	48 16 49 43		Berg and growler (same as 553).
954	do	Arabia	46 35 52 54		Growler.
955	do	do	46 42 52 57		Berg (same as 588).
956	do	do	46 46 52 47		Growler.
957	do	do	47 06 51 42		Berg (same as 491).
958	do	Froydis	47 01 51 54		Medium berg (same as 706).
959	do	Oakby	Cape Bonavista		3 bergs close by.
960	do	do	North Head		Berg offshore.
961	do	OSV Bravo	56 49 51 16		Large berg.
962	do	do	56 46 51 24		2 small growlers.
963	do	USAF aircraft	56 50 59 45		Huge berg.
964	do	Arabia	46 33 53 08		Small growlers.
965	do	do	46 34 53 10		Growler.
966	do	Bastia	46 38 53 00		Growlers.
967	do	do	46 42 53 01		2 small bergs (same as 588).
968	do	Atlantic	Strait of Belle Isle		15 bergs and many growlers between Cape Norman and Point Amour.
969	do	do	51 40 54 55		Berg.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
970	May 21	Atlantic	Belle Isle		2 bergs and 2 growlers aground at Northeast Ledge.
971	do	do	51 52	55 01	Berg.
972	do	do	51 54	55 15	Berg and many growlers.
973	do	do	50 57	57 28	Large berg.
974	do	do	51 12	57 06	Large berg and many growlers.
975	do	do	51 17	56 59	Berg.
976	do	do	51 20	57 08	2 bergs and many growlers.
977	do	USN aircraft	Cape Harrison		Southern boundary of pack ice.
978	do	do	West Greenland		Comprehensive report of ice.
979	do	USCGC Sorrel	46 42	52 50	Berg (same as 705).
980	do	do	46 37	53 12	3 growlers.
981	do	do	46 39	52 50	Small berg (same as 706).
982	May 22	Svane fjell	46 50	52 00	Berg (same as 491).
983	do	Stavangerfjord	46 45	52 50	Medium berg (same as 706).
984	do	USCGC Sorrel	48 33	52 59	Berg.
985	do	do	48 37	52 58	Do.
986	do	do	48 43	52 55	Do.
987	do	do	48 43	53 01	Do.
988	do	do	48 46	52 47	Do.
989	do	do	48 47	53 08	Do.
990	do	USN aircraft	Baffin Bay		Comprehensive ice report.
991	do	Prins Willem	51 04	57 32	Berg and growler.
992	do	do	51 16	56 51	Berg.
993	do	do	51 17	57 12	Growler.
994	do	do	51 21	57 00	Berg.
995	do	do	51 31	56 32	Do.
996	do	do	51 34	56 26	Large berg.
997	do	do	51 42	55 50	Berg.
998	do	do	51 43	56 16	Do.
999	do	do	51 43	56 24	Do.
1000	do	do	51 43	56 27	Do.
1001	do	do	51 43	56 37	Do.
1002	do	do	51 44	55 34	Do.
1003	do	do	51 44	55 46	2 bergs.
1004	do	do	51 45	56 12	Berg.
1005	do	do	51 46	55 34	Do.
1006	do	do	51 47	55 56	Do.
1007	do	do	51 48	55 52	Do.
1008	do	USN aircraft	Labrador		Coastal waters south of Cape Harrison generally free of pack ice but with many bergs and growlers.
1009	do	Prins Willem	51 42	55 50	Berg.
1010	do	do	51 45	56 12	Do.
1011	do	do	51 47	55 56	Large berg.
1012	do	do	51 48	55 52	Do.
1013	do	do	51 54	55 02	Berg.
1014	do	do	51 55	55 07	Do.
1015	do	USCGC Sorrel	49 08	53 21	Do.
1016	do	do	49 12	53 15	Do.
1017	do	do	49 19	53 11	Do.
1018	do	do	49 48	52 56	Stationary radar target.
1019	do	do	49 58	53 02	Numerous growlers.
1020	do	do	50 17	53 20	Do.
1021	do	do	50 22	53 45	Stationary radar target.
1022	do	Narsarsuaq AB	BW-1 Fjord		Bergs and growlers.
1023	do	do	BW-3 Fjord		Growlers and very little brash ice. Bergs and growlers to seaward.
1024	do	USCGC Sorrel	50 36	53 57	Berg.
1025	do	Manchester Explorer	47 09	52 02	Medium berg (same as 830).
1026	do	Caslon	Strait of Belle Isle		15 bergs from Belle Isle to Point Amour.
1027	do	USCGC Sorrel	51 39	55 10	Berg.
1028	do	do	51 41	55 07	Do.
1029	do	do	51 43	55 07	Do.
1030	do	do	51 53	55 06	Small berg.
1031	do	do	51 56	55 08	Do.
1032	do	Manchester Explorer	46 46	52 50	2 bergs.
1033	do	Manchester City	47 07	51 58	Berg.
1034	do	USN aircraft	Labrador		Many bergs and growlers from George Island to Cape Harrison. 18 mile wide pack 50 miles long centered at 54°45' N., 56°50' W.
1035	do	Ice Patrol plane	46 47	52 42	2 small bergs and growlers (same as 705 and 706).
1036	do	do	46 56	52 45	Small berg (same as 491).
1037	do	do	47 13	51 40	Small berg (same as 830).
1038	do	do	48 25	49 54	2 growlers.
1039	do	do	48 25	50 09	Medium berg (same as 553).
1040	do	Cutler	46 53	52 52	Berg (same as 491).
1041	do	do	Cape Ballard		Numerous growlers from Tommy Bank to Cape Ballard.
1042	do	Manchester City	46 40	52 50	Small berg (same as 491).

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1043	May 22	Narsarsuak AB	BW-1 Fjord		Bergs and bergy bits.
1044	do	do	BW-3 Fjord		Little brash ice and 1 growler.
1045	do	USN aircraft	Newfoundland and Labrador.		Scattered patches 4 by 10 miles field ice from Fogo Island to 25 miles northward. No sea ice from 50°15' N, 54°30' W., to Hamilton Inlet. Several bergs in this sector to 50 miles offshore.
1046	May 24	USCGC Sorrel	51 58	55 24	Stationary radar target.
1047	do	do	52 00	55 28	Do.
1048	do	do	52 02	55 34	Do.
1049	do	do	52 04	55 06	Do.
1050	do	do	52 05	55 34	Do.
1051	do	do	52 07	55 36	Do.
1052	do	do	52 10	55 07	Do.
1053	do	do	52 11	55 29	Do.
1054	do	do	52 12	55 08	Do.
1055	do	do	52 15	55 07	Do.
1056	do	USCGC Bibb	47 24	52 11	Small berg (same as 830).
1057	May 25	Hydro., Wash	Baffin Land		Report of ice.
1058	May 26	Franconia	46 49	51 20	Radar target.
1059	do	Thistledowne	48 13	50 37	Stationary radar target believed berg (same as 553).
1060	do	Antonis	48 20	50 55	Berg (same as 553).
1061	do	Galerna	47 17	52 35	Large berg (same as 830).
1062	do	Ice Patrol plane	47 16	52 25	Growler.
1063	do	do	47 17	52 30	Small berg (same as 830).
1064	do	do	47 17	52 50	Berg aground.
1065	do	Atlantic	Strait of Belle Isle		13 bergs and many growlers.
1066	do	do	do		4 bergs south of Belle Isle.
1067	do	Narsarsuak AB	BW-1 Fjord		Bergy bits.
1068	do	do	BW-3 Fjord		Some growlers and bergy bits. Few growlers and close pack ice from 3 miles out to seaward.
1069	May 27	USCGC Evergreen	48 29	51 01	Berg 92 feet high, 400 feet long (same as 553).
1070	do	Unidentified aircraft	49 13	53 15	Large berg.
1071	do	Ice Patrol plane	48 18	50 40	Berg (same as 553).
1072	do	Narsarsuak AB	BW-1 Fjord		Few bergy bits and growlers. Few bergy bits and growlers in close pack ice 4 miles seaward.
1073	do	do	BW-3 Fjord		3 growlers and some brash ice.
1074	do	TCA aircraft	49 13	53 13	Large berg.
1075	do	USCGC Sorrel	51 55	55 26	Berg.
1076	do	do	52 08	55 28	Do.
1077	do	do	52 09	55 30	Do.
1078	do	do	Strait of Belle Isle		Numerous bergs and growlers along shore from Cape Bauld to Cape Norman.
1079	do	do	51 49	55 53	2 bergs.
1080	May 28	Nova Scotia	47 03	52 38	Berg (same as 830).
1081	do	do	47 04	52 38	2 growlers.
1082	do	do	47 05	52 37	Growler.
1083	do	USCGC Sorrel	50 52	57 22	Small berg.
1084	do	do	51 20	56 54	Growler.
1085	do	TWA aircraft	49 30	53 25	3 large bergs 10 miles offshore.
1086	do	Norwich Victory	47 06	52 37	Berg (same as 830).
1087	do	Fort Hamilton	47 05	52 47	Berg (same as 1064).
1088	do	do	47 02	52 45	Berg (same as 830).
1089	do	do	Cape Broyle		Growler and pieces to NNW.
1090	do	Narsarsuak AB	BW-1 Fjord		Clear.
1091	do	do	BW-3 Fjord		Some brash ice and 1 growler.
1092	May 29	USN aircraft	Disko Bay		Many bergs and growlers but no pack ice.
1093	May 30	Foz do Douro	48 16	51 05	Large berg and growler (same as 553).
1094	do	Beaverburn	50 47	58 12	Growler.
1095	do	do	50 47	58 16	Radar target.
1096	do	do	51 10	57 16	Do.
1097	do	do	51 21	56 58	Small berg.
1098	do	do	51 34	56 26	Berg.
1099	do	do	51 41	56 16	Do.
1100	do	do	51 44	56 13	Do.
1101	do	do	51 48	56 04	Do.
1102	do	do	51 52	55 56	2 radar targets.
1103	do	do	51 48	55 32	Several radar targets.
1104	do	do	Belle Isle		No ice sighted east of Belle Isle.
1105	do	Narsarsuak AB	BW-1 Fjord		Berg and bergy bits.
1106	do	do	BW-3 Fjord		Few growlers.
1107	do	USN aircraft	Sondrestrom Fjord		Clear of ice.
1108	May 31	USCGC Evergreen	48 16	50 56	Berg 50 feet high, 200 feet long (same as 553).
1109	do	Durham Trader	50 07	59 40	2 bergs, 1 growler.
1110	do	do	50 07	59 47	3 small bergs.
1111	do	do	50 12	59 34	Large berg.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1112	June 1	USN aircraft	Baffin Land		Report of ice conditions.
1113	do	USN vessel	Strait of Belle Isle		Most southerly berg at 50°00' N., 57°05' W.
1114	do	Narsarssuak AB	BW-1 Fjord		3 bergs and bergy bits.
1115	do	do	BW-3 Fjord		Few growlers and bergy bits.
1116	do	Ice Patrol plane	48 10	51 09	Berg (same as 553).
1117	do	do	52 17	55 08	Berg.
1118	do	do	Cape Freels		6 bergs and 2 growlers in vicinity.
1119	do	do	Bonavista Bay		Berg aground.
1120	do	do	Conception Bay		Do.
1121	do	do	Bonavista Bay		3 bergs, 2 growlers.
1122	do	do	Fogo Island		3 bergs and growler 4 miles to south.
1123	do	do	49 45	53 50	Berg.
1124	do	do	49 45	54 00	Small berg.
1125	do	do	49 52	54 03	Berg.
1126	do	do	Fogo Island		Small berg and 2 growlers 2 miles north-east.
1127	do	do	do		5 small bergs and 2 growlers 4 miles to northwest.
1128	do	do	Between Fogo Island and New World Island.		2 small bergs and 2 medium bergs.
1129	do	do	Bell Island, Newfoundland.		Berg aground at northwest tip.
1130	do	do	Groats Island		Berg aground at northeast tip.
1131	do	do	Hope Bay		Berg at entrance.
1132	do	do	St. Anthony Harbor.		2 small bergs and growler.
1133	do	do	51 27	55 22	Berg.
1134	do	do	Cape Bauld		2 small bergs aground 3 miles south.
1135	do	do	do		2 large bergs aground and numerous growlers.
1136	do	do	Cape Bauld to Cape Norman.		3 bergs.
1137	do	do	51 44	55 18	Berg.
1138	do	do	51 48	55 30	2 bergs and growler.
1139	do	do	Belle Isle		2 bergs and growler aground southwest coast.
1140	do	do	Between Belle Isle and Labrador coast.		4 bergs, 2 growlers.
1141	do	do	52 00	55 35	Berg.
1142	do	do	52 02	55 30	Do.
1143	do	do	52 04	55 30	Do.
1144	do	do	52 06	55 30	Do.
1145	do	do	52 08	55 30	Do.
1146	do	do	52 10	55 05	Do.
1147	do	do	52 10	55 12	3 growlers.
1148	do	do	52 13	55 15	8 growlers.
1149	do	do	52 15	55 08	Growler.
1150	do	do	St. Anthony Harbor, Labrador.		4 bergs aground.
1151	do	do	Spotted Island		2 large bergs, 2 small bergs, and 2 growlers in vicinity.
1152	do	do	53 40	55 45	Large berg and medium berg.
1153	do	do	53 45	55 30	2 growlers.
1154	June 2	USN vessel	53 00	55 30	6 bergs.
1155	do	Narsarssuak AB	Narsak		Few bergy bits and growlers and open pack ice to seaward, and few bergy bits and growlers in fjord.
1156	do	do	BW-3 Fjord		Some growlers and 25 percent floe ice.
1157	do	do	BW-1 Fjord		Clear.
1158	do	USN aircraft	Baffin Island		Lead at northern shore Frobisher Bay joining polyna at 62°25' N, 65°35' W. Open water to southern tip Loks Land.
1159	do	do	Northern Baffin Bay.		Comprehensive report of ice and limits.
1160	June 3	USN vessel	Labrador		Very few bergs and no pack ice from Belle Isle to Cartwright, Labrador.
1161	do	do	55 30	59 30	5 bergs.
1162	June 4	Coulbreck	49 04	53 12	3 bergs.
1163	do	do	49 25	53 35	2 bergs.
1164	do	Narsarssuak AB	Narsak		Many growlers and bergy bits and 45 percent floe ice to seaward; few bergy bits and growlers and little floe ice in fjord.
1165	do	do	BW-3 Fjord		Berg and 2 growlers and 95 percent pack ice.
1166	do	do	BW-1 Fjord		Clear.
1167	do	Ice Patrol plane	Cape St. Francis		2 bergs and 2 growlers in vicinity.
1168	do	do	Trinity Bay		5 bergs and 2 growlers aground on west shore.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1169	June 4	Ice Patrol plane	Cape Bonavista		Berg and growler aground.
1170	do	do	Grates Point		Berg aground.
1171	June 5	Narsarsuak AB	Narsak		Few bergs and growlers seaward; 90 percent pack ice in fjord.
1172	do	do	BW-3 Fjord		80 percent pack ice.
1173	do	do	BW-1 Fjord		Clear.
1174	do	USNS Anacostia	47 48 | 52 30		Berg (same as 1167).
1175	do	do	47 43 | 52 30		Do.
1176	do	USN aircraft	Baffin Bay		Comprehensive report ice limits and conditions.
1177	do	do	Cape Harrison to 58°30' N. 59 15 | 63 00 to 59 15 | 61 15 to 61 30 | 63 00 to		No pack ice in this area to 30 miles seaward.
1178	do	do	63 00 | 60 00 to		Limits of pack ice Labrador coast.
1179	do	Conet	66 00 | 58 00		2 bergs.
1180	do	Rita	50 58 | 58 00		Berg about 75 feet high (same as 553).
1181	do	MSTS Valdez	48 37 | 51 12		Berg (same as 1064).
1182	June 6	Ice Patrol plane	47 10 | 52 50		16 bergs.
1183	do	do	Between Fogo Island and Belle Isle		
1184	do	do	Belle Isle		13 bergs in vicinity.
1185	do	do	Labrador coast between 52°35' N. and 54°00' N.		19 bergs from shore to 25 miles seaward
1186	do	do	53 40 | 54 50		Growler.
1187	do	do	54 10 | 55 00		2 growlers.
1188	do	do	Within 20 mile radius of Southeast Rks, Labrador.		8 bergs.
1189	do	do	White Bear Island. Within 18 mile radius of position 54°50' N., 57°12' W.		25 bergs in vicinity.
1190	do	do	55 10 | 57 45		13 bergs.
1191	do	do	55 15 | 57 10		Berg.
1192	do	do	55 25 | 58 05		Do.
1193	do	do	55 33 | 57 35		Do.
1194	do	do	Within 15 mile radius of position 55°15' N., 58°20' W.		10 bergs.
1195	do	do	Within 20 mile radius of 55°35' N., 59°30' W.		15 bergs.
1196	do	do	56 12 | 58 03		Large berg.
1197	do	do	Within 7 miles of line from 56°10' N., 58°07' W. to 56°50' N., 58°50' W.		12 bergs.
1198	do	do	Between Cape Harrigan and 57°00' N.		18 bergs in area to 30 miles offshore
1199	do	do	57 20 | 59 15		Berg.
1200	do	do	57 45 | 59 40		Do.
1201	do	do	Labrador coast at 58°30' N.		3 bergs.
1202	do	do	Within 5 miles of line from 58°25' N., 61°35' W. to 59°15' N., 62°10' W.		10 small bergs.
1203	do	do	59 00 | 61 00		3 bergs.
1204	do	do	59 52 | 61 43		Berg.
1205	do	do	60 05 | 62 00		Do.
1206	do	do	60 13 | 62 10		Do.
1207	do	do	60 30 | 63 50		2 small bergs.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1208	June 6	Ice Patrol plane.....	Labrador coast.....		The southernmost pack ice is at 54°35' N. between Hamilton Inlet and Cape Harrison. Pack is close along shore to Cape Harrison and 10-15 miles wide to Cape Harrigan, thence a 10 mile lead to shore followed by tongue 10 miles wide extending from beach to 30 miles out at 56°30' N. Northward to 58°30' N., pack is close along shore and discontinuous, varying 3-5 miles width. At 58°30' N. pack extends 70 miles from coast and maintains this width to Cape Chidley and northward. Pack ice ranges open and light becoming close and heavy to north. At Cape Chidley, pack is close and heavy for 30 miles offshore and more open to 70 miles.
1209	June 8	Stad Vlaardingen.....	47 51	52 50	2 bergs and several growlers (same as 1167).
1210	do	Unidentified aircraft.....	55 00	59 00	Many large medium bergs.
1211	June 9	USCG aircraft.....	48 40	51 12	Small berg (same as 553).
1212	do	Stad Vlaardingen.....	47 47	52 54	Growler.
1213	do	do.....	47 47	52 58	Do.
1214	do	do.....	47 48	52 49	Do.
1215	do	do.....	47 48	52 52	Do.
1216	do	do.....	47 49	52 50	Small berg.
1217	do	do.....	47 54	52 52	Berg (same as 1167).
1218	do	do.....	47 55	52 59	Do.
1219	June 10	Hydro, Wash.....	55 43	58 01	Unusually large ice formation.
1220	June 13	Shorva.....	48 48	50 13	Berg observed by radar (same as 553).
1221	do	Ioannis Zafarakis.....	51 58	55 22	Large berg.
1222	June 15	Baron Belhaven.....	48 40	50 20	Small berg (same as 553).
1223	do	do.....	48 43	50 20	6 growlers in a 3 mile radius.
1224	do	USCG aircraft.....	48 40	50 20	Small berg (same as 553).
1225	June 16	Baron Belhaven.....	Bell Island Light-house, Conception Bay.		4 growlers and numerous pieces of ice 3 miles north.
1226	do	Waltham Victory.....	65 55	53 10	Small berg.
1227	June 18	USCG aircraft.....	48 05	52 10	Small berg and 6 growlers.
1228	do	Hydro, Wash.....	60 14	53 45	2 bergs.
1229	do	do.....	60 24	53 31	Berg.
1230	do	do.....	60 44	52 54	Do.
1231	do	do.....	62 25	53 40	Do.
1232	June 19	do.....	62 35	52 53	Do.
1233	do	do.....	55 11	58 22	Rotten floe ice extending 30 miles north.
1234	June 20	do.....	49 14	53 00	8 bergs within a 12 mile radius.
1235	do	do.....	48 49	52 10	Berg.
1236	do	USCG aircraft.....	Conception Bay...		Small berg and growler.
1237	do	do.....	48 00	52 33	Small berg.
1238	do	do.....	48 16	52 30	Growler.
1239	June 22	Hydro, Wash.....			20 bergs and growlers in Strait and inshore along Labrador coast to southern limit at 51°20' N.
1240	June 23	do.....	59 04	54 03	3 bergs.
1241	do	do.....	59 22	54 06	Berg.
1242	do	do.....	60 18	54 02	Do.
1243	do	do.....	60 19	53 55	Do.
1244	do	do.....	61 14	53 54	Do.
1245	do	do.....	61 21	54 04	Do.
1246	do	do.....	62 08	54 45	Do.
1247	June 27	Mormacmail.....	58 40	49 05	3 bergs and growlers.
1248	do	do.....	59 08	48 08	Berg.
1249	do	do.....	59 25	48 15	Berg and growler.
1250	June 28	Pleasantville.....	49 36	53 40	3 bergs.
1251	do	do.....	48 37	52 45	Berg.
1252	July 7	Hydro, Wash.....	51 38	56 19	Do.
1253	July 13	do.....	49 46	53 10	Do.
1254	July 14	do.....	51 39	56 05	Large berg.
1255	July 16	Campogrande.....	50 10	54 25	Large berg, 105 feet high.
1256	July 17	Hydro, Wash.....	49 35	52 40	Large berg.
1257	July 18	USCGC Half Moon.....	49 15	52 13	Small berg drifting south 0.5 knot.
1258	July 20	USCGC Evergreen.....	58 58	45 06	Berg.
1259	do	do.....	58 58	45 11	Do.
1260	do	do.....	59 03	45 10	Do.
1261	do	do.....	59 04	44 40	Do.
1262	do	do.....	59 12	45 05	Do.
1263	July 23	Hydro, Wash.....	53 52	55 55	Large berg and several growlers.
1264	July 26	do.....	54 50	56 05	Berg.
1265	do	do.....	54 55	56 29	Do.
1266	do	do.....	54 56	55 53	Do.
1267	do	do.....	55 04	56 26	4 small bergs.
1268	July 27	do.....	49 35	53 05	Berg.

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1269	July 27	Paludina	52 56	55 29	Large berg.
1270	do	do	53 05	55 31	Small berg.
1271	do	do	53 39	55 38	Large berg.
1272	July 29	Coulbreck	54 26	54 19	Do.
1273	July 30	do	55 43	57 30	6 large bergs and 2 small bergs.
1274	do	do	55 08	56 00	2 bergs.
1275	do	do	55 15	56 10	Do.
1276	do	do	55 15	56 12	3 bergs.
1277	do	do	55 39	56 41	1 large berg.
1278	do	do	55 39	57 10	Berg.
1279	do	Bassano	53 16	52 18	2 large bergs and 6 growlers.
1280	July 31	Hydro, Wash	52 08	55 13	Medium berg.
1281	Aug. 1	do	55 53	57 35	Do.
1282	Aug. 2	Unidentified vessel	52 49	51 51	2 bergs.
1283	Aug. 4	do	52 19	51 26	Berg.
1284	do	Hydro, Wash	52 57	52 57	2 large bergs.
1285	do	USN vessel	Thule, Greenland		Close pack ice with many bergs ab out 10 miles offshore.
1286	Aug. 5	do	do		Many bergs and growlers in area; no pack ice.
1287	Aug. 8	Hydro, Wash	52 27	54 17	Possible berg.
1288	do	do	52 28	51 55	2 bergs, 1 rather large.
1289	Aug. 9	do	Belle Isle		Bergs 4 miles north.
1290	do	do	do		Bergs 10 miles north-northeast.
1291	do	do	do		4 medium and 3 large bergs along first 50 miles from Belle Isle on track G.
1292	do	do	53 27	51 45	Large berg.
1293	Aug. 10	Bassano	53 00	52 16	Large berg, 125 feet high.
1294	Aug. 13	Hydro, Wash	52 50	51 00	Large berg.
1295	Aug. 14	Unidentified aircraft	55 24	57 45	Berg.
1296	do	do	54 54	57 45	Do.
1297	Aug. 15	Hydro, Wash	52 35	50 00	Do.
1298	Aug. 21	Prins Johan Willem Frisco	52 30	50 00	Large berg. Top just broke off with numerous growlers.
1299	Aug. 23	Sneaton	52 33	49 33	2 large bergs.
1300	Aug. 24	Coulbreck	52 38	55 15	Large berg.
1301	do	do	54 46	56 44	Do.
1302	Aug. 26	Unidentified aircraft	51 58	51 10	Very large berg.
1303	do	Unidentified British vessel	52 51	53 04	Large berg.
1304	Aug. 28	USCGC Sorrel	52 02	55 15	Growler.
1305	do	Astoria	52 13	54 53	2 medium sized bergs.
1306	Aug. 29	USCGC Sebago	52 22	55 03	2 medium bergs.
1307	Aug. 30	Hydro, Wash	51 05	51 40	Large berg.
1308	Aug. 31	Lawrence Victory	53 24	55 22	Do.
1309	do	do	54 01	56 40	Berg.
1310	do	do	54 12	56 40	Do.
1311	Sept. 5	Hydro, Wash	Labrador coast		Many growlers close inshore of Belle Isle.
1312	do	do	Strait of Belle Isle		2 medium bergs.
1313	Sept. 7	do	57 46	60 14	Large berg.
1314	do	do	58 10	60 39	Do.
1315	do	do	58 30	60 34	Do.
1316	do	do	58 56	60 44	Do.
1317	do	do	59 05	60 35	Do.
1318	Sept. 16	Hydro, Wash	54 43	56 00	Large berg.
1319	Sept. 21	do	55 10	56 30	3 bergs.
1320	Sept. 27	Paludina	52 00	55 39	Large berg 85 feet high.
1321	Sept. 28	Monroe Victory	54 44	53 40	Large berg.
1322	Oct. 8	Hydro, Wash	59 19	41 44	Berg.
1323	Oct. 13	do	51 09	54 56	Berg, 100 to 150 feet high.
1324	Oct. 19	do	49 59	53 48	Medium berg (same as 1323).
1325	Oct. 20	do	53 36	55 30	Berg, 300 feet long, 40 feet high.
1326	Oct. 22	Captain Farmakides	49 46	54 14	2 small bergs.
1327	do	do	49 22	52 56	Medium berg (same as 1323).
1328	Oct. 26	Hydro, Wash	59 24	48 00	Scattered bergs and bergy bits.
1329	do	do	53 24	55 22	Large berg.
1330	do	do	53 18	55 24	Do.
1331	Oct. 28	do	52 48	54 38	Berg.
1332	Nov. 5	do	53 35	55 13	Growler.
1333	Nov. 11	do	58 00	39 00	3 bergs in area of 20 square miles.
1334	Nov. 15	USNS Peconic	52 00	55 18	Small berg (same as 1331).
1335	do	Hydro, Wash	52 00	55 30	Small berg (same as 1334).
1336	Nov. 17	do	53 24	55 30	Medium berg (same as 1325).
1337	Nov. 24	Hydro, Wash	53 27	55 31	2 bergs (same as 1335).
1338	do	do	52 22	55 29	Berg.
1339	Nov. 25	do	53 17	55 26	Large berg 30 feet above water, 450 feet long (same as 1330).

TABLE OF ICE REPORTS, 1953—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1340	Dec. 12	Hydro, Wash.....	60 51	34 56	Small berg and growlers.
1341	do.....	do.....	59 32	37 00	Radar target.
1342	do.....	do.....	59 24	37 00	Small berg.
1343	Dec. 13	do.....	57 58	39 03	Berg and growlers.
1344	do.....	do.....	57 46	39 33	Do.
1345	do.....	do.....	57 44	40 47	Large berg.
1346	do.....	do.....	57 29	39 52	Berg and growlers.
1347	do.....	do.....	57 24	39 54	Do.
1348	do.....	do.....	57 12	40 14	Do.
1349	do.....	do.....	56 58	40 33	Do.
1350	do.....	do.....	56 50	40 46	Do.
1351	Dec. 17	do.....	59 47	38 00	Berg.
1352	Dec. 20	Trans Canada plane.....	56 32	40 45	Large berg.
1353	do.....	Hydro, Wash.....	61 39	33 03	Do.
1354	do.....	do.....	61 37	33 10	Do.
1355	Dec. 22	Mormacisle.....	57 49	38 29	Berg.
1356	Dec. 23	do.....	58 52	34 56	Small berg.
1357	Dec. 24	Scandinavian plane.....	49 30	50 30	2 large bergs.

PHYSICAL OCEANOGRAPHY OF THE GRAND BANKS REGION AND THE LABRADOR SEA IN 1953¹

By Floyd M. Soule, A. J. Bush, and J. E. Murray, U. S. Coast Guard

The 180-foot tender-class cutter USCGC *Evergreen* again served in 1953 as the oceanographic vessel of the ice patrol. The only major change affecting the oceanographic work was the installation on the starboard side of the fantail of a davit and cradle to handle and hold a new instrument known as a deep electronic bathythermograph. As the instrument traces a curve of temperature against depth it will be referred to by the abbreviated title TD in a subsequent description of it and the work done with it.

The oceanographic survey work of the 1953 ice patrol season began with the departure of the *Evergreen* from Argentina on the evening of 1 April. Because of the rapid movement of a couple of early season bergs along the eastern slope of the Grand Banks to and somewhat westward of the southern end of the banks the first survey was planned to include a small area just west of the Tail of the Banks and extending around the southern end of the banks and northward along the eastern slope of the banks to about the 46th parallel.

The work of collection of data began at the southwestern corner of the survey on the early morning of 3 April and was completed without interruption from the weather on the early afternoon of 14 April, 66 stations having been occupied. A course was then laid for Argentina where the *Evergreen* arrived on the morning of 16 April.

On the evening of 26 April the *Evergreen* departed Argentina for the purpose of making a second survey, this time of the waters over and immediately seaward of the northeastern and eastern slopes of the Grand Banks north of about 45° N., and west of about 45° W. The survey began on the morning of 28 April at the northwestern edge of the area and progressed southward. The survey work was interrupted on the evening of 28 April after completing station 5063 to search the area of probable drift of a berg reported at 47°55' N., 47°40' W., at 1430 G. C. T., on the 27th. Current fixes were obtained once an hour with the von Arx current meter (GEK) and, following arrival at the reported position at 0730 G. C. T., on 29 April, the ship proceeded downstream as indicated by the GEK for 33 miles after which a ladder search, beginning 6 miles farther downstream, was undertaken back

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toward the reported position. Two radar targets found in the area were identified as vessels. The *Evergreen* then returned to the position of station 5064 and resumed oceanographic work on the late evening of 29 April. No further interruptions occurred and the survey, comprised of 81 stations was completed on the early morning of 9 May. Course was then laid for the vicinity of station 5130 where earlier measurements indicated the presence of surface water of approximately the desired salinity for use as substandard water. The location was reached on the late afternoon of 9 May and a carboy of water was collected for use during subsequent surveys. The *Evergreen* then proceeded toward Argentia and after searching the area in the vicinity of Cape Race and westward for bergs Argentia was reached on the evening of 11 May.

A third survey was begun with the departure of the *Evergreen* from Argentia on the afternoon of 26 May. This survey consisted of the occupation of the Bonavista triangle beginning and ending at the offshore corner. The work of collection of data began late on 27 May. Work progressed counterclockwise around the triangle without incident until the early morning of 29 May when the Wenner salinity bridge developed a derangement in its measuring circuits. Tests indicated the existence of a ground inside the tank containing the constant temperature oil bath. On completion of station 5155 the ship was hove to on the easiest possible heading while the bridge was completely dismantled, the grounded circuit remedied, and the bridge reassembled. Operations were then resumed after a delay of about 14 hours. No further interruptions occurred and the last of the 30 stations comprising the survey was completed on the early morning of 31 May. The *Evergreen* then proceeded to Argentia arriving there about noon on 1 June.

At midday on 5 June the *Evergreen* departed Argentia to begin a fourth survey. The area to be covered was similar in location to that of the first survey but extending northward to the latitude of Flemish Cap and omitting the area westward of the southern end of the Grand Banks. Work began at the northern end of the area on the afternoon of 6 June and was completed, after the occupation of 78 stations, on the early morning of 17 June. As the International Ice Patrol had been discontinued for the 1953 season during the progress of the survey the *Evergreen* proceeded to Boston to await the beginning of the postseason cruise.

On the afternoon of 7 July the *Evergreen* departed Boston to begin the postseason observations reaching the offshore corner of the Bonavista triangle on 11 July. Proceeding counterclockwise around the triangle the last of the 30 stations was completed on the afternoon of 14 July. From this point the *Evergreen* proceeded to South Wolf Island where, on the early morning of 16 July, a section across the Labrador Sea to Cape Farewell, Greenland, was begun. Just seaward

of the Labrador continental shelf it was necessary for the first and only time during the 1953 operations, to heave to because of boisterous weather. After a delay of approximately 18 hours progress was resumed. A coastal belt of ice off Cape Farewell, combined with darkness and low visibility forced the termination of the section, the last of 22 stations being completed 14½ miles off Cape Farewell late on the evening of 20 July. The *Evergreen* then proceeded via Argentina to Woods Hole where the field work for 1953 was concluded with the unloading on 27 July of oceanographic equipment and personnel.

The oceanographic work was under the supervision of Oceanographer Floyd M. Soule who was assisted by LCDR Armand J. Bush and LT John E. Murray. Other assistants in the observational work were Francis N. Brown, yeoman first class; Lewis M. Lawday, aerographer's mate second class; Hugh R. McCartney, Jr., aerographer's mate second class; Donald Zacher, aerographer's mate third class; and Joseph R. Stefanick, seaman.

Of the 306 stations occupied during the season and postseason cruises, the 22 stations comprising the section across the Labrador Sea were occupied from the surface to as near bottom as was practicable, and at the remaining 284 stations the observations extended to a depth of about 1,500 meters where the depth of water permitted. As in previous years the intended depths of observation, in meters, were 0, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1,000, and thence by 500-meter intervals. The dynamic heights have been referred to the 1,000-decibar surface, except for the section across the Labrador Sea where the 1,500-decibar surface was used as the reference surface.

In addition to the usual measurements of temperature and salinity, 261 samples were taken during the occupation of the South Wolf Island-Cape Farewell section for ultimate determination of total phosphorus concentration.

Temperatures were measured with deep sea reversing thermometers. Most of the protected thermometers were of Richter and Wiese manufacture but a small percentage were manufactured by Negretti and Zambra, G. M. Manufacturing Co., and the Kahl Scientific Instrument Corp. The depths of observation were based on unprotected thermometers made by Richter and Wiese and by Kahl. The thermometers were used in pairs and a program of intercomparison of protected thermometers was carried out by periodically changing the individual thermometers comprising the pairs. In all 2,042 comparisons were made. After eliminating constant corrections these comparisons gave a probable difference between the corrected readings of a pair of thermometers of 0.011° C. As many of the thermometers had recent laboratory comparisons with thermometers tested by the National Bureau of Standards, and as in most cases the temperatures are the means of the corrected readings of a pair of thermometers, it is considered that the observed temperatures listed

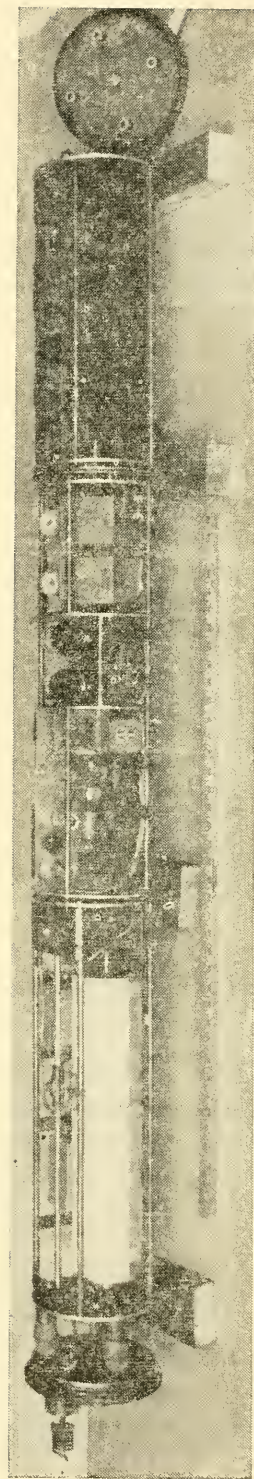


FIGURE 12.—Interior sections (upper, center, and lower) of deep electronic bathythermograph assembled outside of pressure case.

in the table of oceanographic data have a probable error of about $\pm 0.01^{\circ}$ C.

The new TD mentioned above is a self-contained instrument of rapid response which traces a continuous curve of temperature against depth on a scale of approximately 11.2 mm. per degree C and 13.6 mm. per 100 meters. The temperature scale accommodates 35 centigrade degrees and the depth range is limited to 1,800 meters. The temperature element is an electrical resistance thermometer which controls the axial position of the pencil carriage. The depth element is a helical Bourdon tube which controls the angular position of the drum holding the record chart. The movements of pencil and drum are the electronically magnified changes in balance of the alternating current thermometer bridge and of the changes in shape of the Bourdon tube followed up by means of a linear differential transformer (Schaevitz). A frequency of 400 cycles is used in the servo balancing systems and a 12 volt lead nonspill battery is the primary power source.

The instrument is made up in 3 sections which are assembled in a steel pressure case 6 feet long and having an outside diameter of 8 inches and a wall thickness of three-eighths of an inch. The assembled instrument weighs 337 pounds in air and about 200 pounds in water. The forward or lower section contains the battery which must be removed periodically for charging. The rear or upper section contains the recording drum and must be removed, at least partially, to change the record chart. The center or control section need be removed only infrequently. Figure 12 shows the three sections assembled outside the pressure case. A block diagram of the instrument is shown in figure 13. A more detailed description is contained in Woods Hole Oceanographic Institution's unpublished report of February 1953 "The Deep Electronic Bathythermograph" by Karl E. Schleicher (Reference No. 53-10).

In use the TD was shackled, in lieu of a sinker, to the lower end of the oceanographic wire rope to which the Nansen bottles and reversing thermometers were attached. As the instrument had been used on only a small number of lowerings previously, no standard handling procedure had been developed. Because of its weight and size the TD was very difficult to control in launching it from and returning it to its cradle on deck. On numerous occasions the side of the case hit the side of the ship with varying degrees of impact resulting in displacements of the atmospheric pressure position of the Shaevitz transformer core. On one occasion the thermal element hit the A frame and this probably was responsible for the eventual failure of the instrument when it filled with water through the thermal element. In all, 26 casts were made. Many of these were trials after unsuccessful attempts to remedy faults. As a result 14 traces were obtained

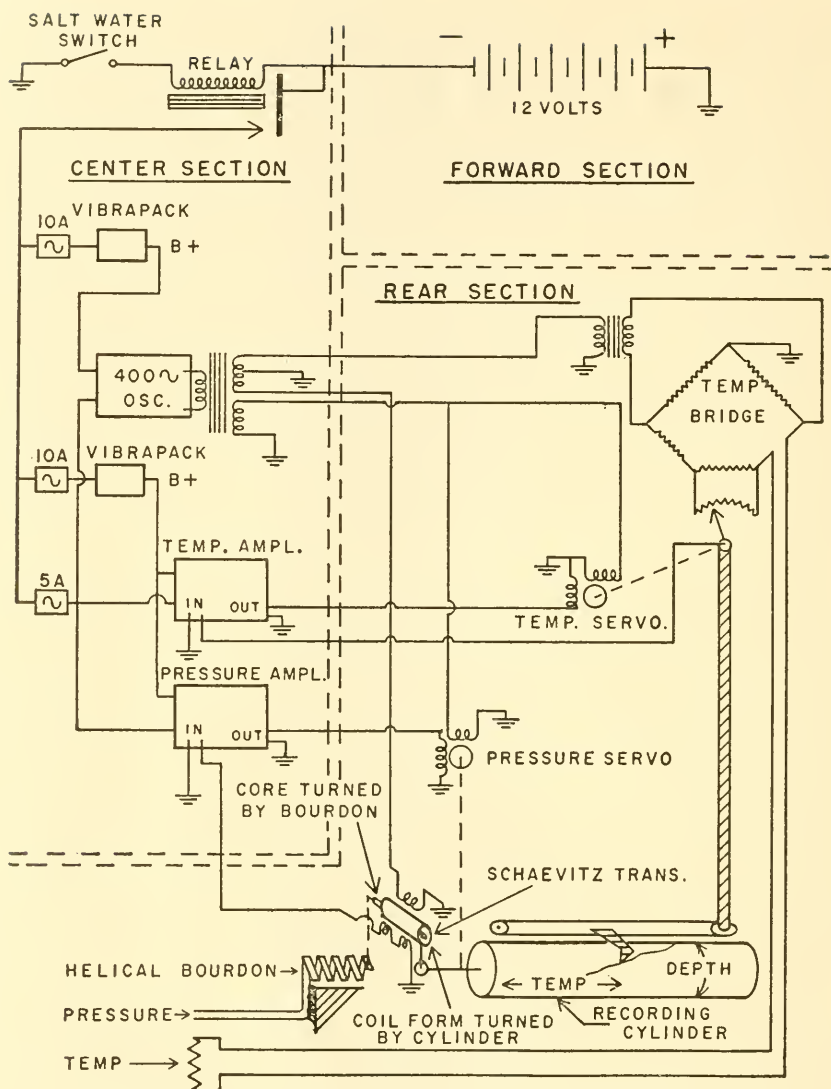


FIGURE 13.—Block diagram of deep electronic bathythermograph.

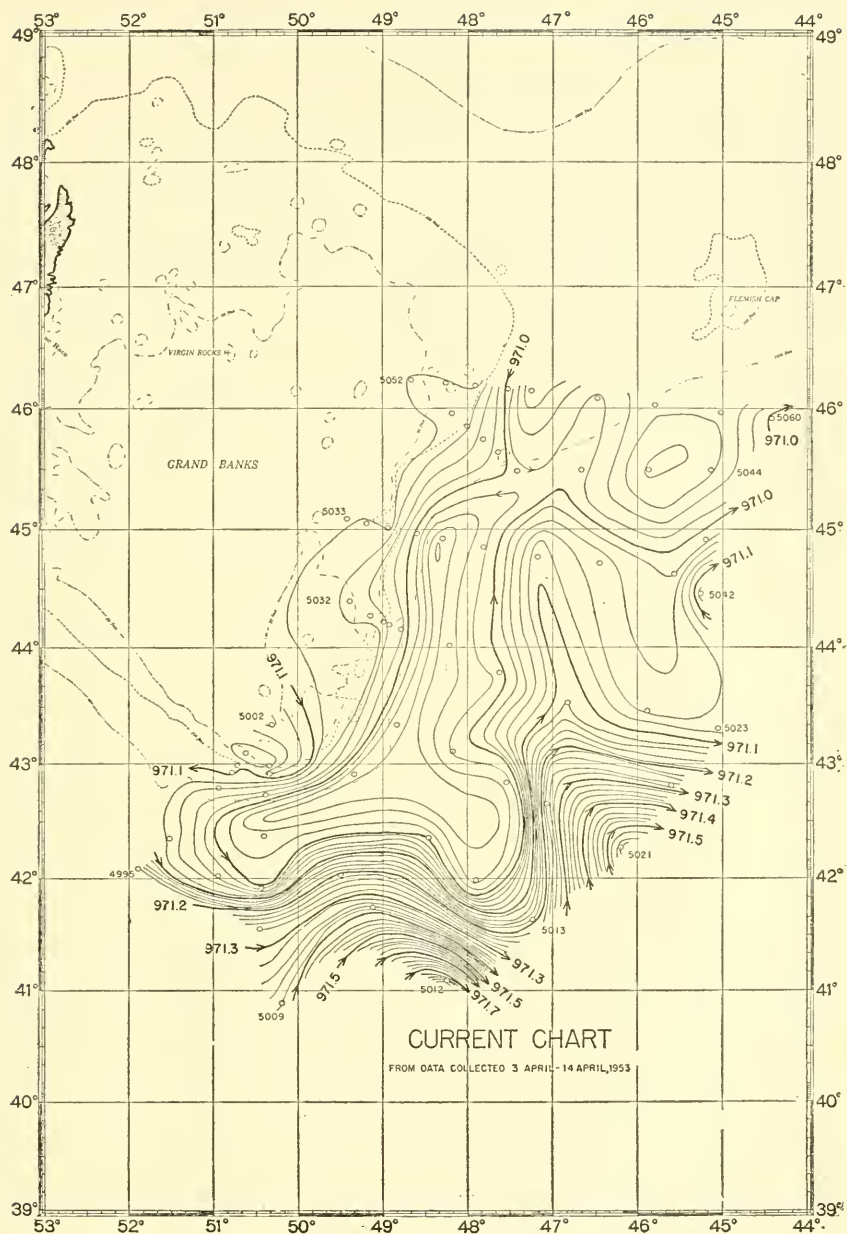
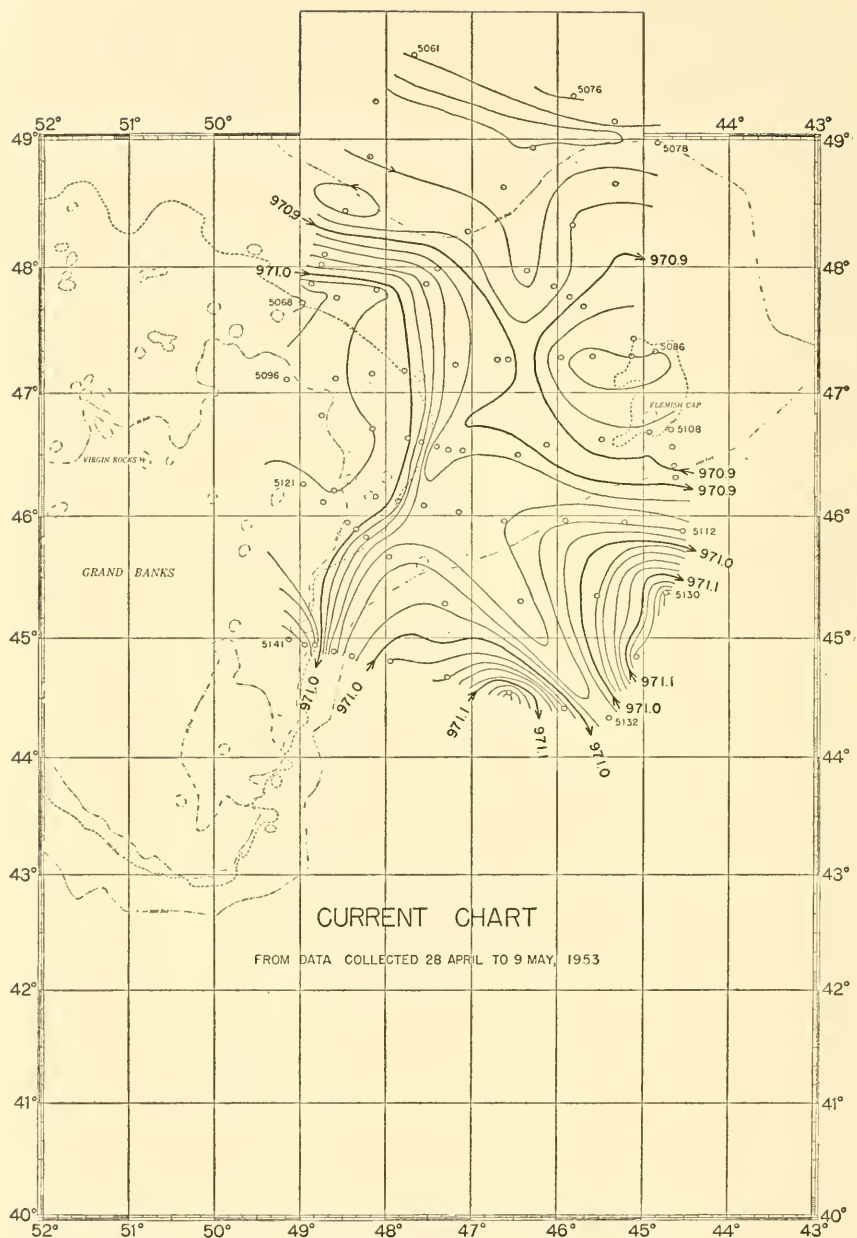


FIGURE 14.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 3-14 April 1953. Oceanographic station positions are indicated and the station numbers given at turning points.



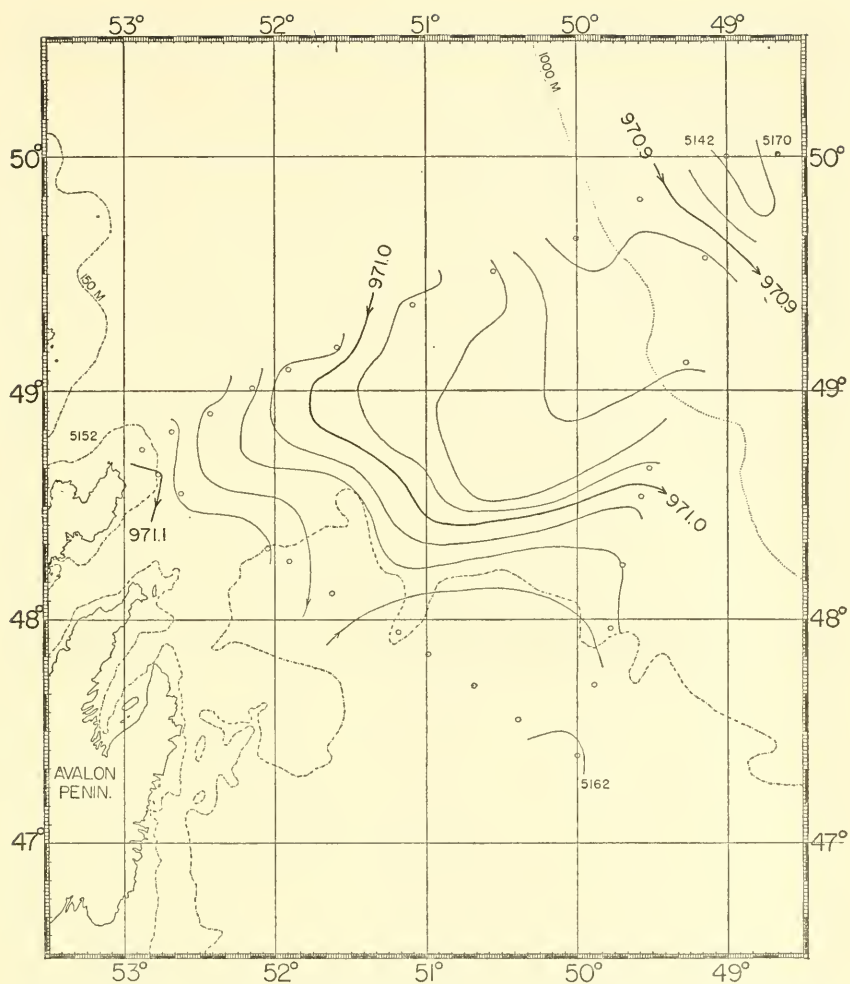


FIGURE 16.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 27–31 May 1953. Oceanographic station positions are indicated and the station numbers given at turning points.

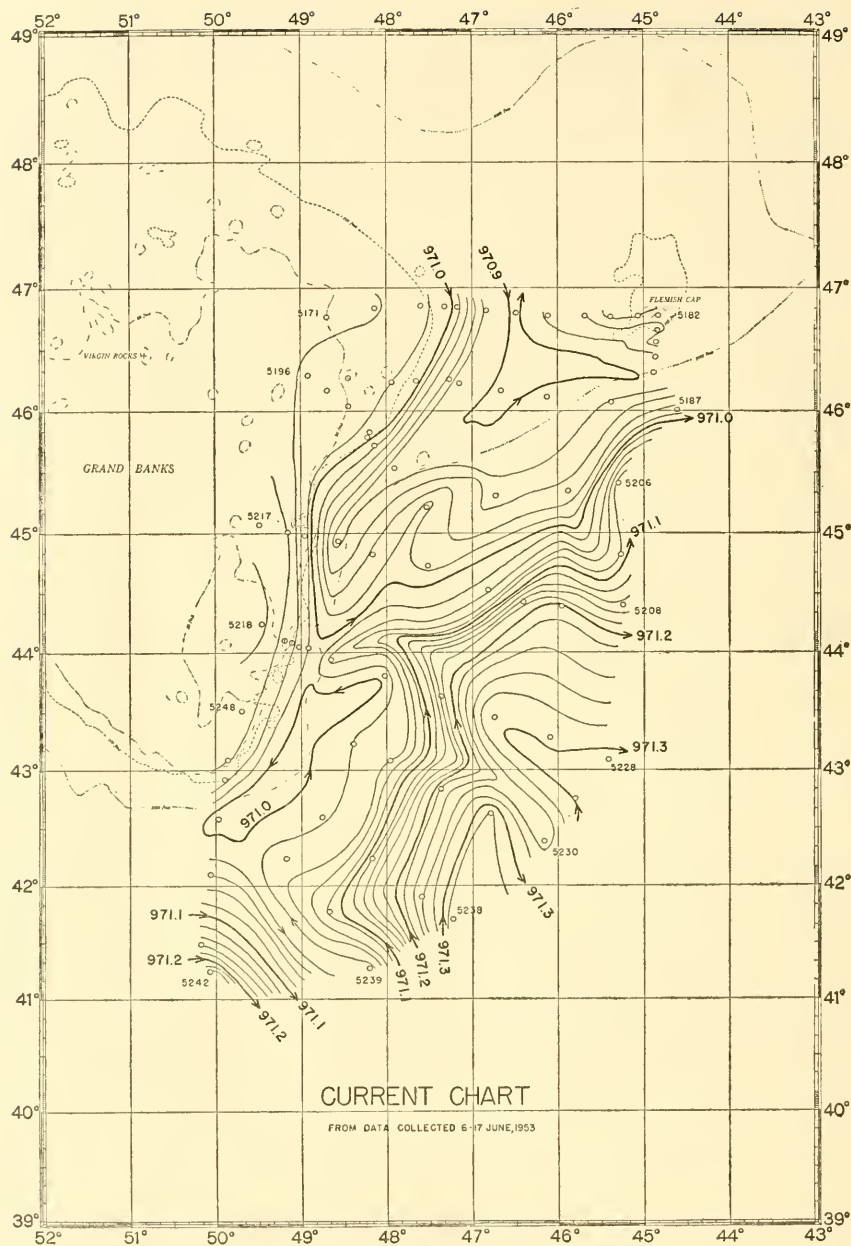


FIGURE 17.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 6–17 June 1953. Oceanographic station positions are indicated and the station numbers given at turning points.

and of these 12 are regarded as useable in comparing the TD measurements with reversing thermometers.

As in previous years routine salinity determinations were made with a Wenner salinity bridge. Standardizations were made with water from an oil-sealed carboy of sea water and at least twice during each run a sample of Copenhagen standard water of the batch P17 was measured as an unknown. At the end of each survey these measurements of Copenhagen water were used to correct all the salinities measured during the survey. For each of the surveys, including the postseason cruise, these indicated corrections were less than 0.005‰ and so no corrections have been made.

Figures 14 through 17 show, in chronological order, the dynamic topography of the sea surface found during the four surveys made during the season. Figure 14 shows the Labrador Current along the eastern edge of the Grand Banks to have had a subnormal surface speed but increasing to swifter than usual at the Tail of the Banks. Bergs entering this pattern from the north might reach the Tail of the Banks and drift thence westward to longitudes of between $50^{\circ}30'$ W., and $51^{\circ}50'$ W., thence southward to about 42° N., and thence easterly. There was little likelihood of bergs reaching farther south than about $41^{\circ}45'$ N. At the southern edge of the surveyed area the Atlantic Current was flowing with considerable strength and the height of 971.776 dynamic meters at station 5012 is probably the highest that has been found by the ice patrol in the area covered by this survey. An associated feature of figure 14 is that the pool of cold mixed water, which has frequently been found extending southeasterward from the Tail of the Banks, was of smaller extent than usual. Bergs entering the area from the north and crossing the 46th parallel between about 47° W., and $47^{\circ}30'$ W., could have been taken in a southeasterly direction to positions of potential hazard to the North Atlantic Track Agreement tracks between about 45° N., and 46° N.

The areas covered by the first and second surveys overlap between about $44^{\circ}30'$ N., and 46° N., but this is insufficient to permit following particular meanders with certainty. In the Labrador Current shown in figure 15 the southward path to the Tail of the Banks apparently remained unobstructed for those bergs which might have passed the 47th parallel between longitudes of about $47^{\circ}15'$ W., and $48^{\circ}00'$ W. As in the first survey, figure 15 shows the possibility of bergs entering the area from the north proceeding in a general southeasterly direction to menace the Track Agreement tracks between about 45° N., and 46° N. In fact a weak clockwise eddy centered over the northern part of Flemish Cap appeared to be the only obstruction to the

eastward branching of the Labrador Current between latitudes 46° N., and 49° N. Cold mixed water covered all of the area except those margins in the southeastern part of the surveyed area where the dynamic heights were greater than about 971.1 dynamic meters.

Figure 16 shows the dynamic topography found during the third survey. It should be borne in mind that in surveys of the Bonavista triangle the middle part of the triangle is too distant from oceanographic stations to permit of accurately estimating the details of the dynamic topography there. In this particular survey there is also some uncertainty as to the longitude of the southeastern section of the triangle. Just prior to this occupation of the triangle an intense low barometric pressure system persisted for several days in the area of the triangle. It was anticipated that its effect would be to weaken the eastern branch of the Labrador Current and strengthen the western branch. Figure 16 verifies this in part. However, this portion of the current which was diverted westward toward Cape Bonavista seemingly did not continue southward along the Avalon Peninsula but recurved eastward along the northern slope of the Grand Banks.

Only 6 days separated the last station of the third survey and the first station of the fourth survey. Figures 16 and 17, therefore, are more nearly two parts of the same synoptic picture than is usually the case with two successive surveys. Comparison of figures 15 and 17 in the area between 45° N., and 47° N., shows the changes taking place during the approximately 1-month interval. The contour lines took on a more regular shape in the later survey and the meanders in this area seem to be less noticeable although many of the features, somewhat displaced, are recognizable in each figure. At about 44° N., figure 17 shows a westward incursion of Atlantic Current water which accompanied the northeastward recurvature of a major part of the Labrador Current north of this latitude. South of 44° N., the cold mixed water pool was considerably reduced in area compared to the first survey although it extended southward very nearly to 41° N. The dynamic heights in margins of the Atlantic Current in the southeastern edge of the surveyed area were not as high as usual.

The volume of flow, mean temperature, and heat transport of the Labrador Current have been determined for each of 19 sections occupied during the 1953 season and postseason cruises. Some of these sections have been occupied in other years, and in the case of sections T, U, and W, numerous occupations have provided the data for determining rough approximations to normal seasonal variation curves. These have been published in bulletin number 36 of this series. Less is known of the seasonal variation in the Labrador

Current at the Bonavista triangle. However, 12 occupations of this triangle during the 6-year period 1948-53 are now available and the results are summarized in table 1. In this table as well as in subsequent tables, figures, and discussion the units are as follows: volume of flow, 1 million cubic meters per second; mean temperature and minimum observed temperature, degrees Centigrade; heat transport, 1 million cubic meter degrees C per second. In table 1 some of the 1950 values appear in parentheses to indicate a greater than usual amount of estimation. In the first 1950 occupation a large change occurred during the occupation of the southeast section of the triangle. In the second 1950 occupation the southeast section was not occupied and the values were derived by difference. In the third 1950 occupation the southwest section was not occupied but it is estimated from the other two sections that none of the Labrador Current was following the western branch.

The northwest section is considered to include the total Labrador Current off Cape Bonavista, the southwest section including the western branch and the southeast section including the eastern branch. Thus the volume and heat transports are determined twice for any occupation of the triangle, once on entering the triangle (northwest side) and once on leaving the triangle (the sum of the southwest and southeast sides). The values under the heading "mean triangle" are the means of these two determinations for volume and heat transport, while the mean temperature is derived as the mean heat transport divided by the mean volume transport.

In figure 18 the individual values given in table 1 have been plotted against time of year and identified by the last two digits of the year of observation. In all years where more than one occupation occurred the rate of change was computed. Giving each year equal weight, mean values, assumed to apply at the mean date and adjusted by the mean rate, were taken as approximate seasonal normals. The inconsistencies appearing in table 1 and figure 18 may be taken as an indication of the limitations of the observations and the methods employed in their reduction.

These seasonal normals have been used for comparison with the 1953 occupations of the Bonavista triangle. In the case of the South Wolf Island section across the Labrador Current, although there have been 16 occupations in as many different years from 1928 to 1953, nearly all have been made at about the same time of year and no attempt has been made to derive seasonal variation curves. Instead the 1953 results have been compared with average values. For the section F (between the Grand Banks and Flemish Cap) and the sections

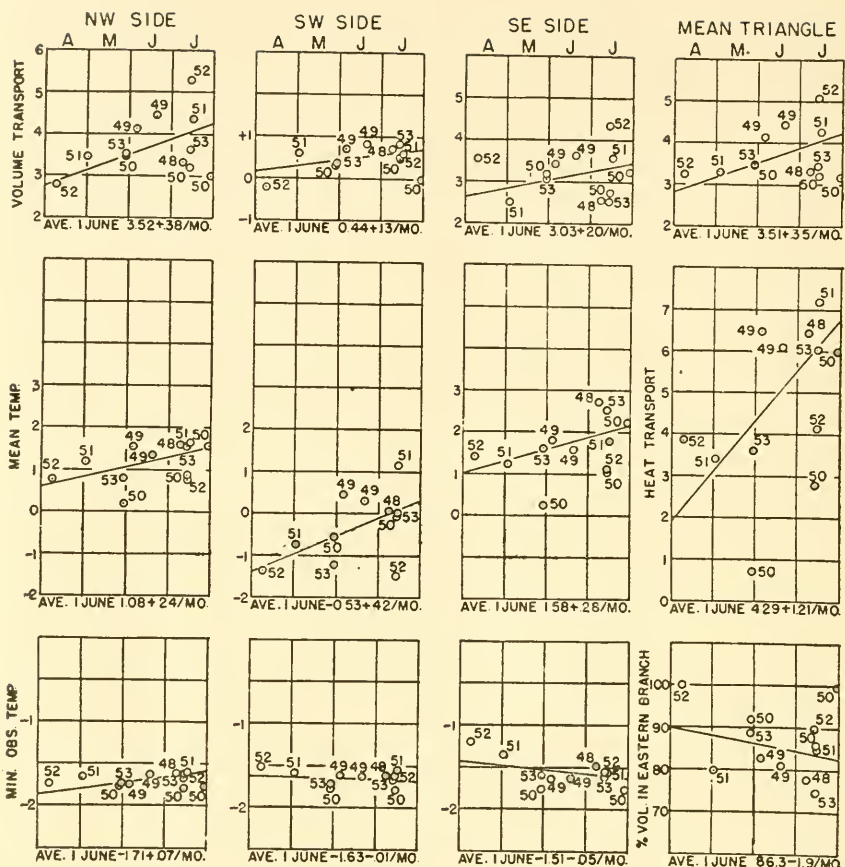


FIGURE 18.—Seasonal variations in the elements of the Bonavista triangle.

G and H (between section F and the Bonavista triangle) too few occupations have been made even to derive average values. Table 2 presents a summary of the velocity sections across the Labrador Current occupied in 1953 and comparisons with normal values where available. Sections T, U, and W are located as follows: T extending southeasterly from about $46^{\circ}20' \text{ N.}$, $49^{\circ}00' \text{ W.}$; U extending eastward from the Grand Banks at about 45° N. ; W extending southward from the Grand Banks at about 50° W.

Table 1.—SUMMARY OF VELOCITY SECTIONS AT BONAVISTA TRIANGLE

	1948	1949	1950	1951	1952	1953
NW section:						
Volume.....	3.35	4.13	3.21	3.48	2.77	3.58
Mean Temperature.....	1.60	1.54	0.87	1.19	0.78	0.79
Heat.....	5.36	6.35	2.80	4.15	2.16	2.83
Minimum Temperature.....	-1.59	-1.73	-1.78	-1.64	-1.73	-1.73
SW section:						
Volume.....	0.73	0.72	0.46	0.61	*-0.20	0.39
Mean Temperature.....	0.07	0.47	-0.05	-0.71	-1.34	-1.27
Heat.....	0.51	0.34	-0.17	-0.43	-0.26	-0.49
Minimum Temperature.....	-1.61	-1.61	-1.78	-1.58	-1.52	-1.70
SE section:						
Volume.....	2.55	3.46	(2.75)	2.52	3.56	3.02
Mean Temperature.....	2.75	1.82	(1.03)	1.23	1.42	1.62
Heat.....	7.01	6.30	(2.82)	3.09	5.08	4.89
Minimum Temperature.....	-1.47	-1.63	-1.75	-1.33	-1.20	-1.59
Mean triangle:						
Volume.....	3.32	4.15	(3.21)	3.30	3.26	3.50
Heat.....	6.44	6.50	(2.80)	3.40	3.85	3.62
Mean Temperature.....	1.94	1.57	(0.87)	1.03	1.18	1.03
Percent in E. Branch.....	1.78	83	86	80	100	89

*0.20 northeast.

Table 2.—SUMMARY OF VELOCITY SECTIONS ACROSS LABRADOR CURRENT OCCUPIED IN 1953

Section	Volume transport			Mean temperature			Minimum observed temperature			Heat transport		
	1953	Normal	Anomaly	1953	Normal	Anomaly	1953	Normal	Anomaly	1953	Normal	Anomaly
First survey:												
T.....	1.28	3.35	-2.07	0.81	1.95	-1.14	-1.55	-1.40	-0.15	1.04	6.53	-5.49
U.....	2.90	5.28	-2.32	0.92	1.53	-0.61	-1.36	-1.21	-0.15	2.72	8.08	-5.36
W.....	6.06	4.25	+1.81	2.06	2.07	-0.01	-0.86	-0.51	-0.35	12.48	8.80	+3.68
Second survey:												
H.....	2.86			0.86			-1.54			2.46		
G.....	3.15			1.53			-1.61			4.82		
F.....	1.43			1.71			-1.33			2.44		
T.....	0.65	3.38	-2.73	0.76	1.82	-1.06	-1.44	-1.38	-0.06	0.49	6.15	-5.66
U.....	3.29	4.55	-1.26	1.38	2.10	-0.72	-1.26	-1.18	-0.08	4.55	9.56	-5.01
Third survey:												
NW.....	3.58	3.50	+0.08	0.79	1.07	-0.28	-1.73	-1.71	-0.02	2.84	3.75	-0.91
SW.....	0.30	0.43	-0.04	-1.27	-0.56	-0.71	-1.70	-1.63	-0.07	-0.49	-0.24	-0.25
SE.....	3.02	3.02	0.00	1.62	1.56	+0.06	-1.59	-1.51	-0.08	4.89	4.71	+0.18
Fourth survey:												
F.....	2.74			2.85			-1.18			7.80		
T.....	1.61	2.67	-1.06	1.83	1.83	+0.05	-0.67	-1.55	+0.88	3.02	4.89	-1.87
U.....	3.73	3.54	+0.19	1.97	2.22	-0.25	-0.41	-1.22	+0.81	7.36	7.86	-0.50
W.....	2.81	4.16	-1.35	4.10	3.45	+0.65	0.74	-0.50	+1.24	11.55	14.35	-2.80
Postseason:												
NW.....	3.63	4.06	-0.43	1.57	1.42	+0.15	-1.65	-1.61	-0.04	5.71	5.76	-0.05
SW.....	0.83	0.62	+0.21	0.00	0.07	-0.07	-1.67	-1.64	-0.03	0.00	0.04	-0.04
SE.....	2.52	3.31	-0.79	2.52	1.98	+0.54	-1.62	-1.58	-0.04	6.34	6.55	-0.21
South Wolf Island.....	5.02	4.45	+0.57	2.43	2.48	-0.05	-1.21	-1.47	+0.26	12.19	11.60	+0.59

Table 2 shows the volume of flow of the Labrador Current to have been decidedly subnormal at sections T and U during the first survey. During the second survey, while both sections were still below normal, section U had begun to recover and by the fourth survey was about normal. The fourth survey also showed partial recovery at section T. The unusually large volume at section W in the first survey is considered to be made up partly of recirculating mixed water some of which was also present at section U.

The volume transport was close to normal at each of the sections of the Bonavista triangle during the third survey but did not follow the normal seasonal increase so that during the postseason cruise the volume at the triangle was subnormal. The significance of the positive anomaly at the southwest section during this occupation is that a smaller than normal proportion of the current was following the eastern branch. The dynamic topography at the sea surface found at the Bonavista triangle during the postseason cruise is shown in figure 19.

Of the other sections in the Grand Banks region only section F was occupied more than once. The increase in volume at this section between the second survey and the fourth survey is interpreted as meaning that part of the Labrador Current continued farther south before recurving to the northeast during the fourth survey than was the case during the second survey.

The mean temperatures were below normal at sections T and U during the first two surveys and near normal at the time of the fourth survey. At section W the mean temperature was near normal at the first survey and above normal during the fourth survey. The mean temperature at the Bonavista triangle was below normal during the third survey and above normal at the time of the postseason cruise. An exception to these general statements is that it will be noted that the mean temperature at the southeast section of the triangle during the third survey was about normal as was section T during the fourth survey. It will be remembered that the southeast section of the triangle represents the eastern branch and that the third and fourth surveys were close together in time of occupation. It is considered that the subnormal temperatures and volumes and their recoveries indicate an initial but decreasing deficiency in that component of the Labrador Current which is supplied by the West Greenland Current.

The minimum observed temperatures were slightly colder than but near normal during the first three surveys. The higher than normal minimum temperatures observed during the fourth survey at sections T, U, and W are looked upon as being the result of northeastward recurvature of Labrador Current water although this is not so clearly indicated by the volume transports. During the postseason cruise the minimum observed temperatures at the Bonavista triangle were close to normal. The circulation deduced from data in table 2 has

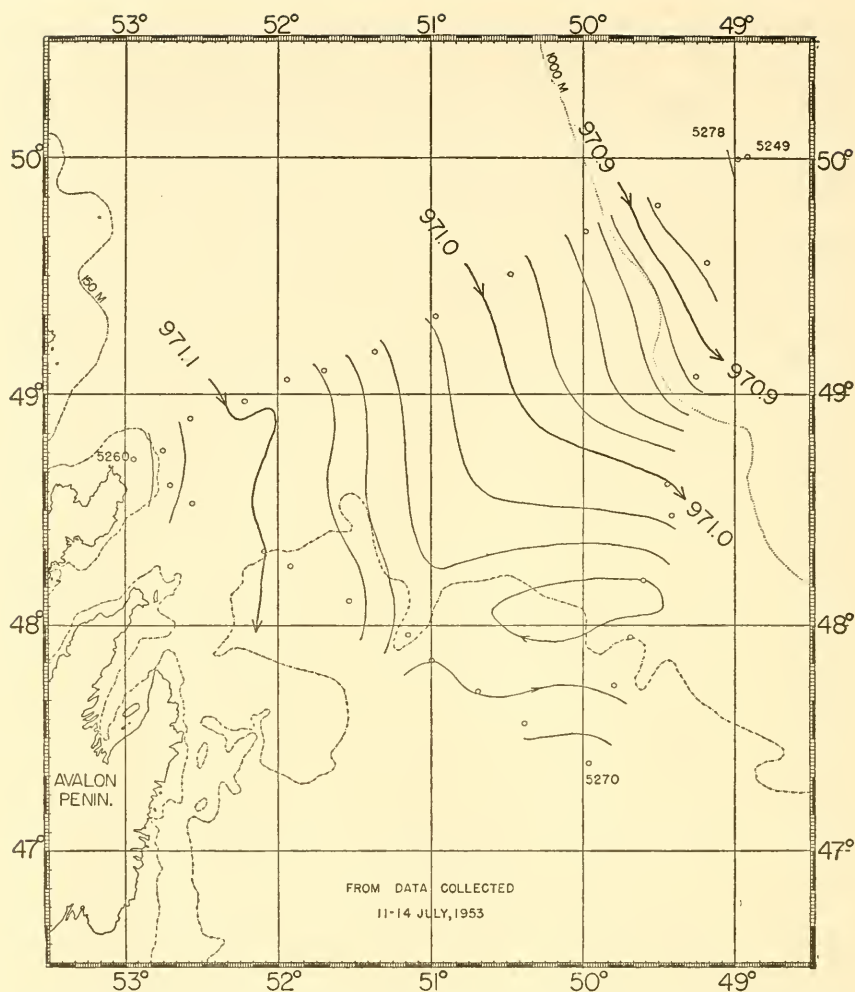


FIGURE 19.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 11–14 July 1953. Oceanographic station positions are indicated and the station numbers given at turning points.

been shown schematically in figure 20. This figure will be referred to subsequently after consideration of the velocity section across the West Greenland Current off Cape Farewell.

Table 2 shows the Labrador Current off South Wolf Island during the postseason cruises to have been above average in volume and close to average in mean temperature. It is noted that not only was the minimum observed temperature about a quarter of a degree warmer than average, but it was 0.46° warmer than that at the Bonavista triangle occupied a few days earlier. An examination of the records shows that 1953 was not the only year during which the post-season cruise data included colder minima at the triangle than at the South Wolf Island section. Temperature minima and their cor-

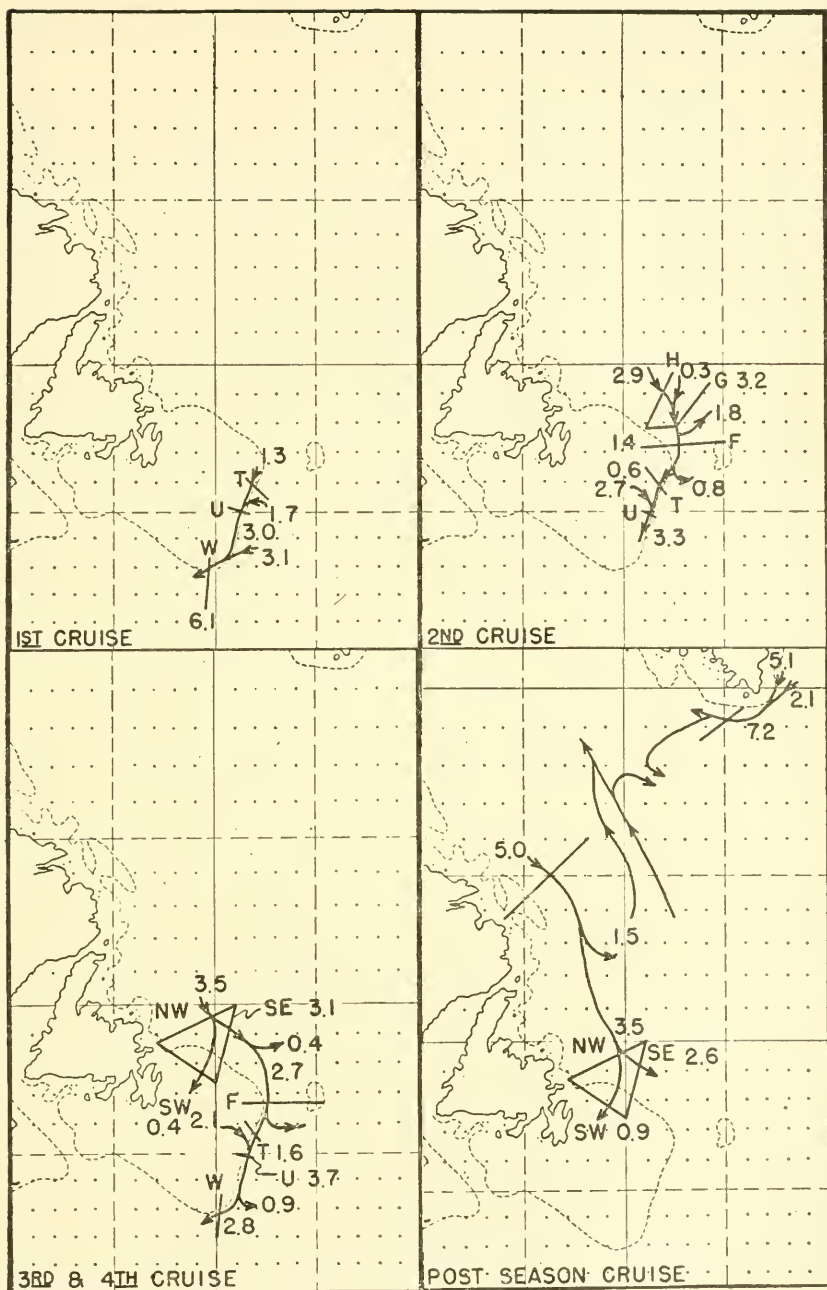


FIGURE 20.—Schematic representation of circulation deduced from sections occupied during 1953. Numerals indicate volume transport in units of $\text{cu.m/sec.} \times 10^{-6}$.

responding observed salinities are tabulated below for all the years during which observations were made:

Year	South Wolf Island		Bonavista Triangle	
	Temperature	Salinity	Temperature	Salinity
1948.....	-1.55	32.72	-1.61	33.17
1949.....	-1.70	32.98	-1.62	33.28
1950.....	-1.68	32.82	-1.76	33.16
1951.....	-1.34	32.66	-1.58	33.00
1952.....	-1.68	32.78	-1.63	33.13
1953.....	-1.21	32.88	-1.67	33.06
Average.....	-1.53	32.81	-1.64	33.13

These years were not especially warm years, as the average minimum observed temperature for all 16 years during which the South Wolf Island section has been occupied is -1.47° . At both the South Wolf Island section and the Bonavista triangle the coldest water is found not far from the beach and at a depth of about 75 meters in the summer time. At such a depth there is no direct warming from the surface and certainly at the more southerly sections T and U in the Grand Banks region the normal minimum temperatures is essentially constant ($\pm 0.05^{\circ}$) from 1 April to 1 July. The great stability of the upper layers in summer time makes it improbable that the temperature minimum is much affected by the stirring of recent gales.

The summer time salinity distribution in a section across the Labrador Current with the isohalines inclined downward toward the beach indicates the seaward spreading of the relatively fresh coastal water at the surface and the compensating shoreward movement of the saltier deeper water. This screwing motion, with its associated upwelling along the beach must be decidedly affected (increased or decreased) by the occurrence of protracted periods of offshore or on-shore winds.²) It is not known whether the process ever proceeds at such a rate that the disturbed isopycnals result in a north-flowing or counter current along the beach. In any case the transverse movements in themselves have little direct effect on the temperature minimum layer since the transverse movements take place above and below it. They might introduce saltier surface water and, by reducing the vertical salinity gradient and the stability, facilitate wind stirring to the depth of the summer time temperature minimum earlier in the fall with warmer temperatures.

Such an explanation would require that the salinities at the temperature minima be greater at the section with the warmer temperature minima. This, however, is not in accord with the observations. The above tabulation shows the average salinity at the temperature minimum at the South Wolf Island section to be about 1 percent less

² In Trinity Bay, Newfoundland, it is understood to have sufficient effect on bottom temperatures to require adjustments in transatlantic cable operations.

than at the Bonavista triangle. This suggests that the water found in the temperature minima at the South Wolf Island section in summer time were formed with the onset of cold weather in the autumn and the water at the temperature minima found at the Bonavista triangle in summer time were formed later in the winter after concentration of the salt through freezing and removal of about 75 to 100 cm. of ice. The reconcillation of the two essential parts of such a mechanism (mixing or stirring to a depth of some 75 meters or more and the formation of an ice cover which would prevent wind stirring) is not difficult when it is remembered that the ice covering is frequently opened by storms through rafting and by the ice being blown seaward. Almost certainly such a mechanism would produce different minimum temperatures in different years and would probably produce different minimum temperatures in different geographical parts of the area of formation during the same year. Such irregularities are in accord with observations in the Grand Banks region. Assuming that the season during which such a mechanism would be operating would be limited to about 5 months of the year, September to April, the explanation leaves much to be desired in accounting for what happens in the other 7 months and would seem to require a seasonal variation in volume transport or that the area in which such stirring occurs extend over more than the distance traveled in a single year.

From table 1 the mean heat transport at the Bonavista triangle just prior to the occupation of the South Wolf Island section was 5.98 and the mean volume transport was 3.96 for the 6 years 1948-53. During the same years at the South Wolf Island section the mean heat transport was 12.83 and the mean volume transport 5.13. By difference the mean heat and volume transports of that part of the Labrador Current which branches eastward between the South Wolf Island section and the Bonavista triangle are 6.85 and 1.17 which give a mean temperature of about 5.8° . It is considered that this mean temperature is too high but it emphasizes that it is the warmer offshore part of the current which is diverted from the Grand Banks by such branching.

Not all of the eastern branch of the Labrador Current as it leaves the Bonavista triangle passes through the valley between the Grand Banks and Flemish Cap, but part of it recurves northeastward. This recurvature is of considerable practical importance in determining the degree to which bergs endanger the steamer tracks passing southeastward of Flemish Cap. It has been noted qualitatively that as the ice season advances a larger proportion of bergs fail to move southward between the Grand Banks and Flemish Cap. The area of this recurvature, northward of Flemish Cap and the northeastern slope of the Grand Banks is one from which comparatively few data are available. Hence, even though the approximate normals for the Bonavista triangle as derived above and the approximate normals for section T are on very shaky foundations it is of interest to consider the difference

between the normals for the volume transports of the eastern branch at the Bonavista triangle and at section T as an indicator of the seasonal change in the volume of the recurving current northward of the valley between the Grand Banks and Flemish Cap. The accuracy with which the two normals are known is too doubtful for the derived

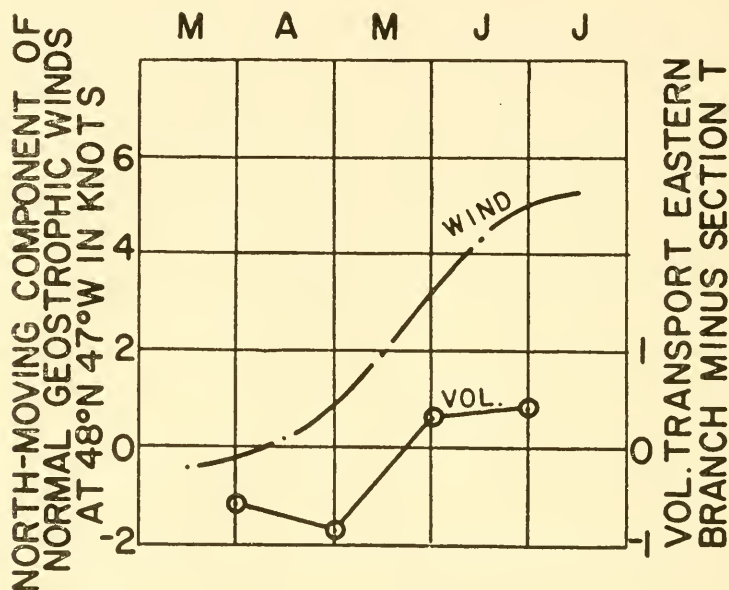


FIGURE 21.—Derived volume transport of part of Labrador Current recurving northeastward northward of Flemish Cap and north-moving component of normal geostrophic wind at 48° N., 47° W.

volume of recurvature to be considered reliable. The derived recurvature has been computed for each of 4 months, however, and the points plotted in figure 21. They show an increase of about a million cubic meters per second from the first half of the season to the second half. The negative sign of the early season points (meaning an additional contribution from the Labrador Sea), may not be real.

The explanation usually offered in the past for the presumed seasonal increase in this northeastward recurvature was the seasonal change in wind direction into the southwest. An examination of the monthly mean normal barometric pressure distribution shows not only a shift in direction but also an increase in gradient as the Iceland low moves westward and the Azores high moves northward. The geostrophic wind has been scaled from these normal charts at 48° N., 47° W., and the south (north-moving) component has been plotted in figure 21. Although in the case of the Labrador Current factors

directly effecting density distribution are of greater relative importance than in many ocean areas where the winds play a dominant part in determining the currents, the wind does have an important effect in modifying the Labrador Current. The magnitude of the component of the geostrophic wind shown in figure 21 is not spectacular but its seasonal increase is in qualitative agreement with the northeastward diversion of a part of the Labrador Current and with the observed behavior of late-season bergs.

The 14 usable traces obtained from the TD and mentioned earlier in the description of instruments and methods are reproduced in figures 22 to 35. Superimposed on the traces are the temperatures obtained with reversing thermometers attached to the wire during the TD cast. The reversing thermometer temperatures are connected by broken lines. The solid lines are drawn through values of σ_t computed from the observed salinities and the reversing thermometer temperatures. While there has accumulated a considerable mass of data from bathythermograph casts and although the BT is a rapid response instrument it is not very stable and to date has been limited in depth range to about 275 meters. It is considered doubtful that the BT is reliable to the desired precision of 0.1° but we are hopeful that even with the experimental model of the TD used such a precision was attained. Figures 22 to 35, then, represent the first reliable subsurface temperature data obtained with a rapid response instrument between depths of 275 and 1,500 meters and probably between the surface and 1,500 meters. The precision with which the TD recorded depth was not as satisfactory, not because of any inherent weakness in design but simply because the windings of the Schaevitz transformer were mounted on a shaft with a press fit instead of being rigidly pinned and the friction was not sufficient to prevent accidental rotation of the windings with respect to the instrument thus producing fortuitous shifts of the atmospheric pressure position of the drum carrying the trace.

The traces can be grouped as coming from four general geographical areas: figures 22-24 are from the area southwest of the Tail of the Banks; figures 25-28 are from the area near the offshore corner of the Bonavista triangle; figures 29 and 30 are from south of Flemish Cap; and figures 31-35 are centered around the 45th parallel east of the eastern slope of the Grand Banks. The first group involve multiple lowerings: to approximately 100, 300, and 1,500 meters wire length in the case of figure 22; to 300, 500, 1,170, and 1,596 in the case of figure 23; and to 300, 1,506 and 300 in the case of figure 24. Thus there should be in figure 22 for example, 6 traces in the upper 100 meters, 4 traces from 100 to 300 meters and 2 traces from 300 to 1,500 meters. In the other figures there are only the downtrace and the uptrace except for figure 25 where various lowerings were made preliminary to

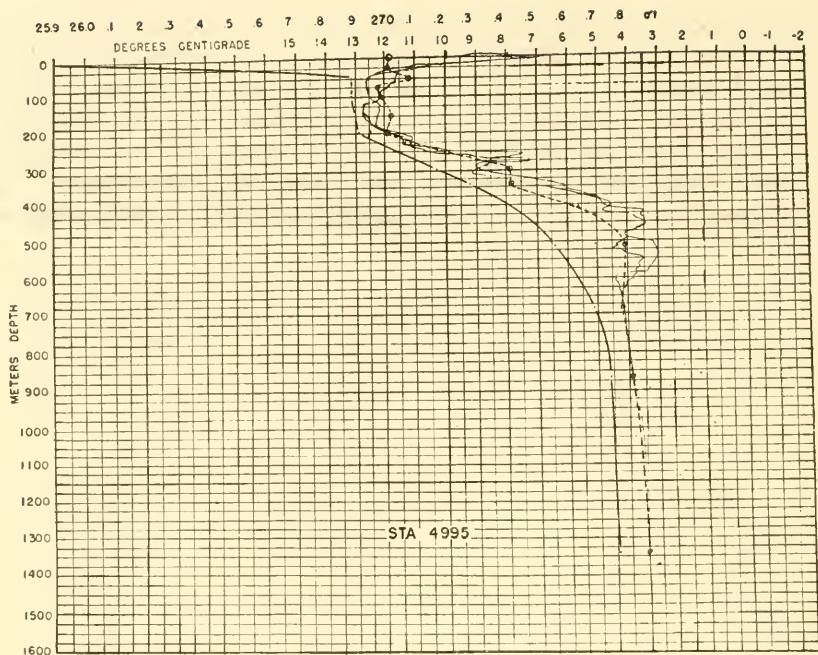


FIGURE 22.—Temperature trace of TD at station 4995; 3 April 1953; 42°04.5' N., 51°53' W. In figures 22-35 the temperatures by reversing thermometers have been superimposed and connected by a broken line. The solid lines connect values of σ_t computed from reversing thermometer temperatures.

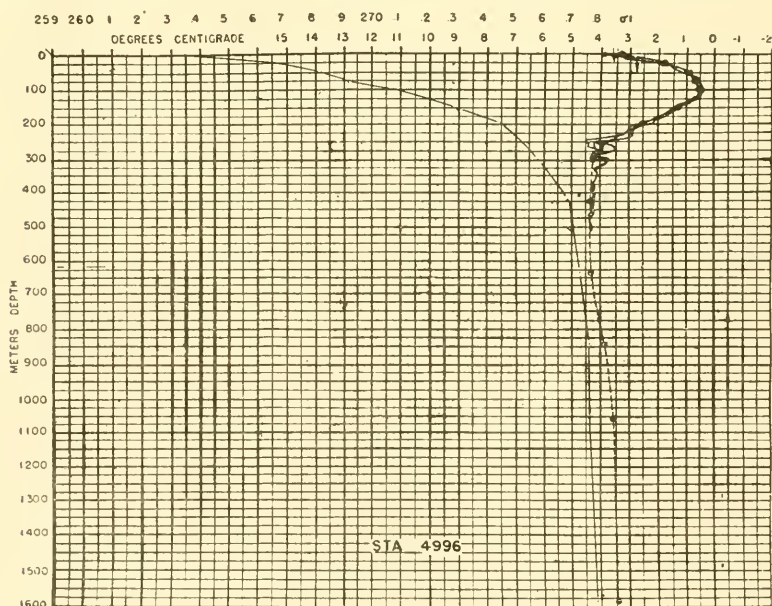


FIGURE 23.—Temperature trace of TD at station 4996; 3 April 1953; 42°01' N., 50°57' W.

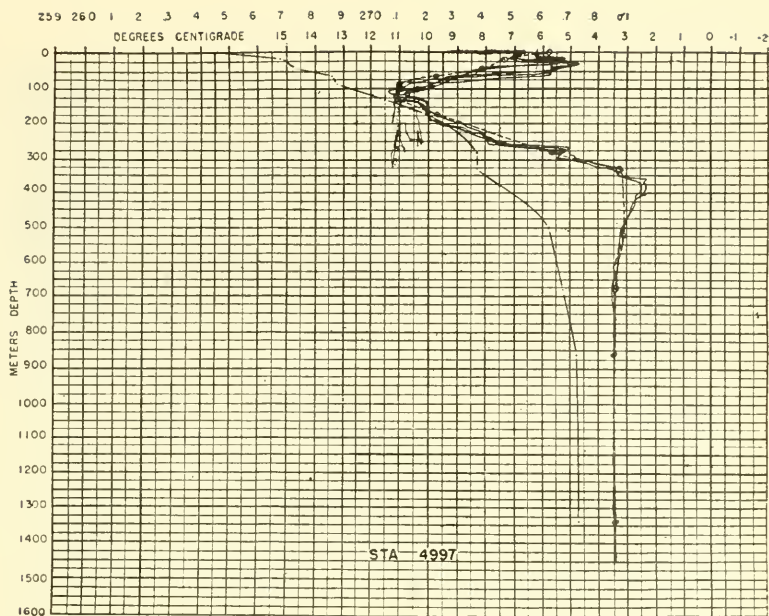


FIGURE 24.—Temperature trace of TD at station 4997; 3 April 1953; 42°21' N., 51°31' W.

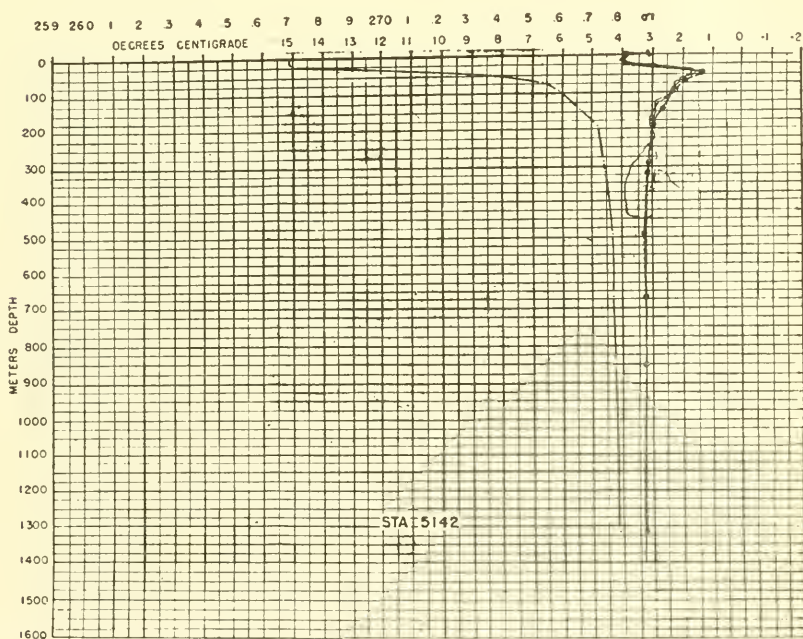


FIGURE 25.—Temperature trace of TD at station 5142; 27 May 1953; 50°00' N., 49°00' W.

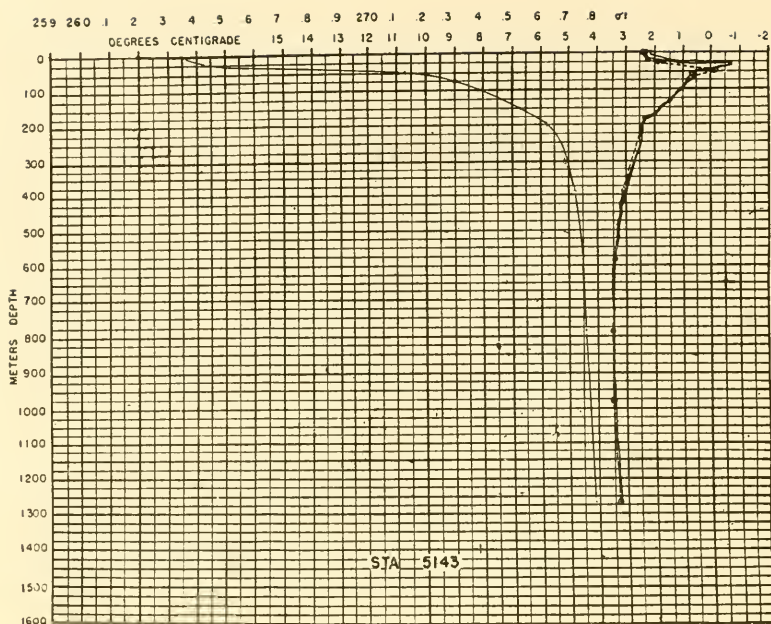


FIGURE 26.—Temperature trace of TD at station 5143; 28 May 1953; 49°49' N., 49°34' W.

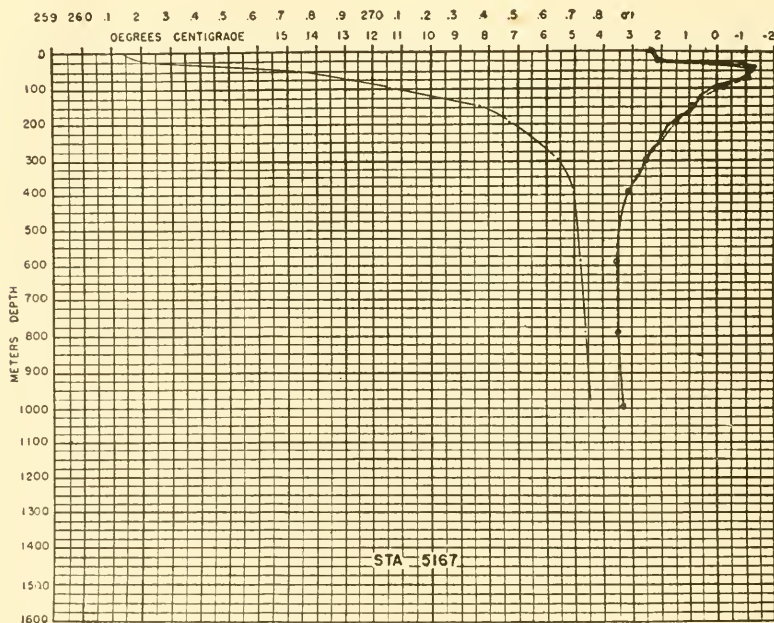


FIGURE 27.—Temperature trace of TD at station 5167; 30 May 1953; 48°40' N., 49°31' W.

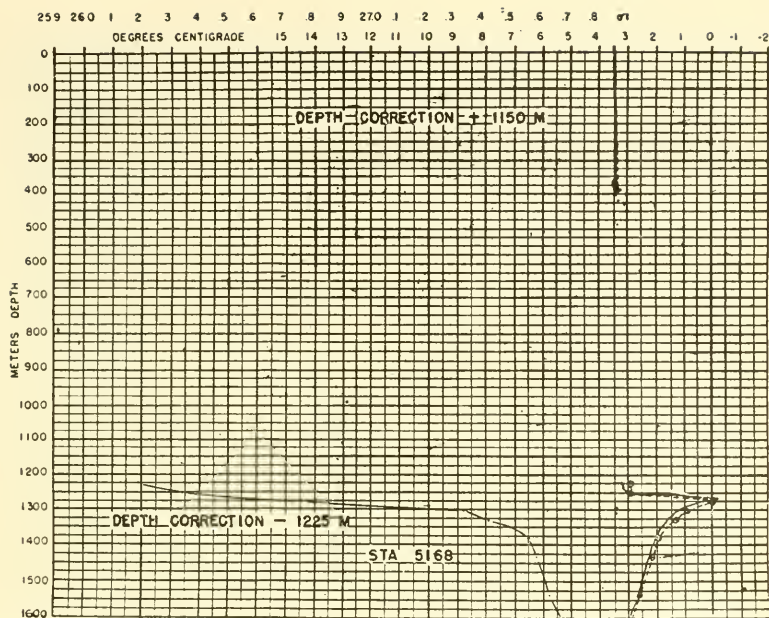


FIGURE 28.—Temperature trace of TD at station 5168; 30 May 1953; $49^{\circ}07' N.$, $49^{\circ}16' W.$

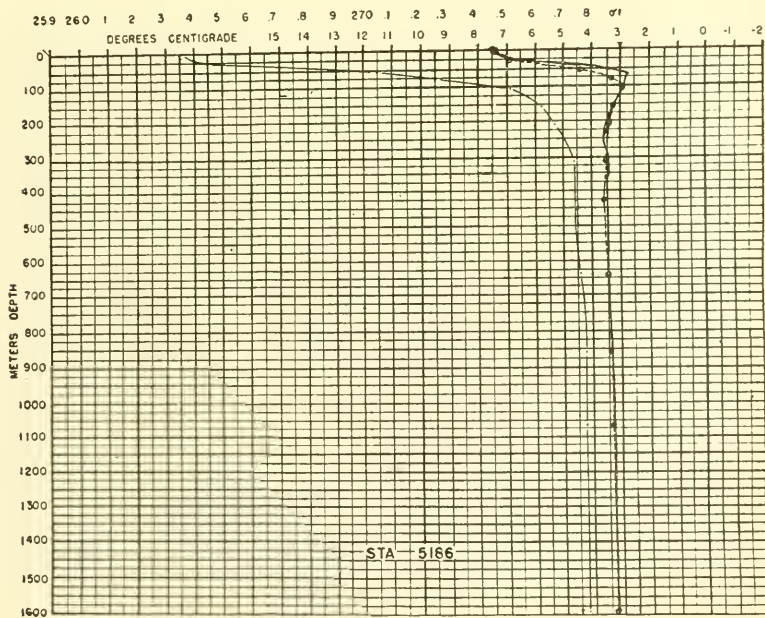


FIGURE 29.—Temperature trace of TD at station 5186; 7 June 1953; $46^{\circ}19.5' N.$, $44^{\circ}54' W.$

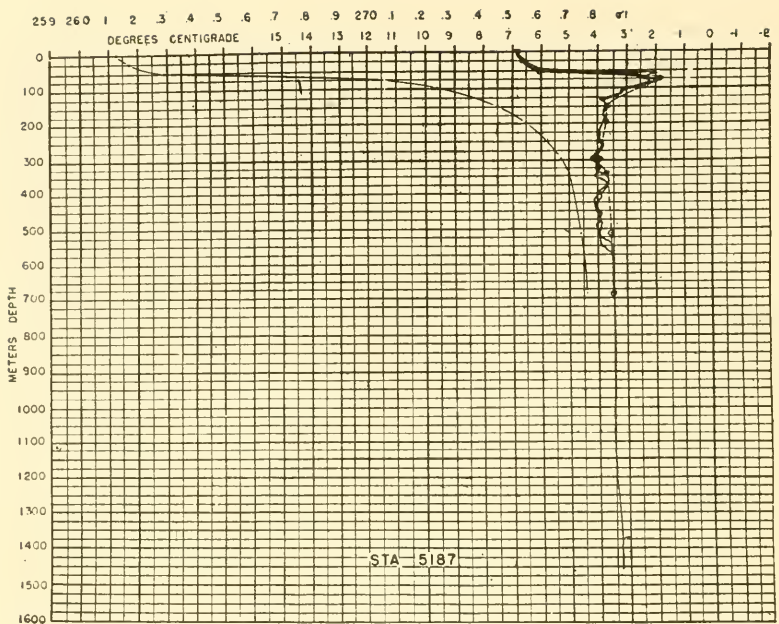


FIGURE 30.—Temperature trace of TD at station 5187; 7 June 1953; $46^{\circ}01'$ N., $44^{\circ}37'$ W.

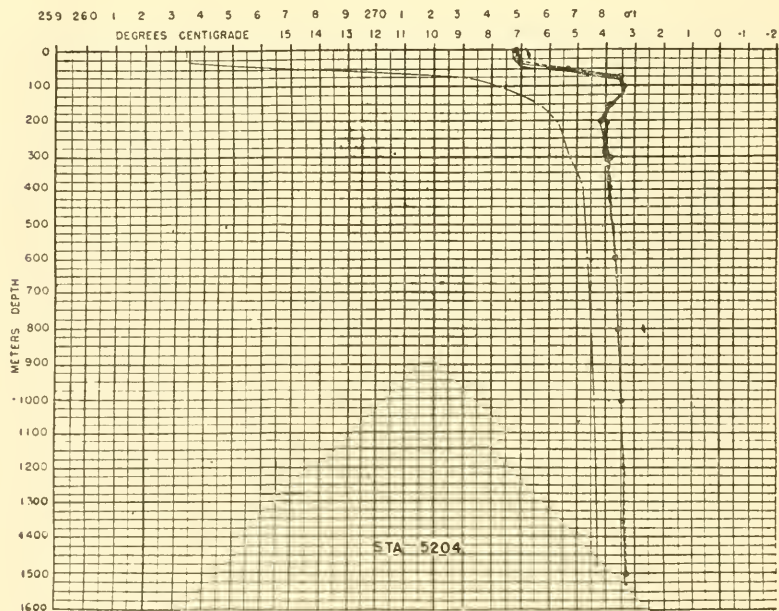


FIGURE 31.—Temperature trace of TD at station 5204; 9 June 1953; $45^{\circ}19'$ N., $46^{\circ}44'$ W.

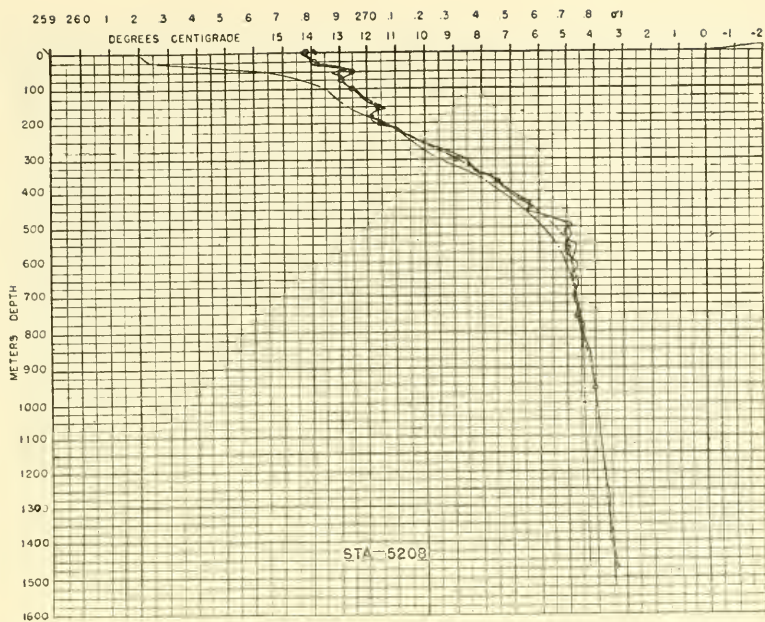


FIGURE 32.—Temperature trace of TD at station 5208; 10 June 1953; $44^{\circ}24.5'$ N., $45^{\circ}15'$ W.

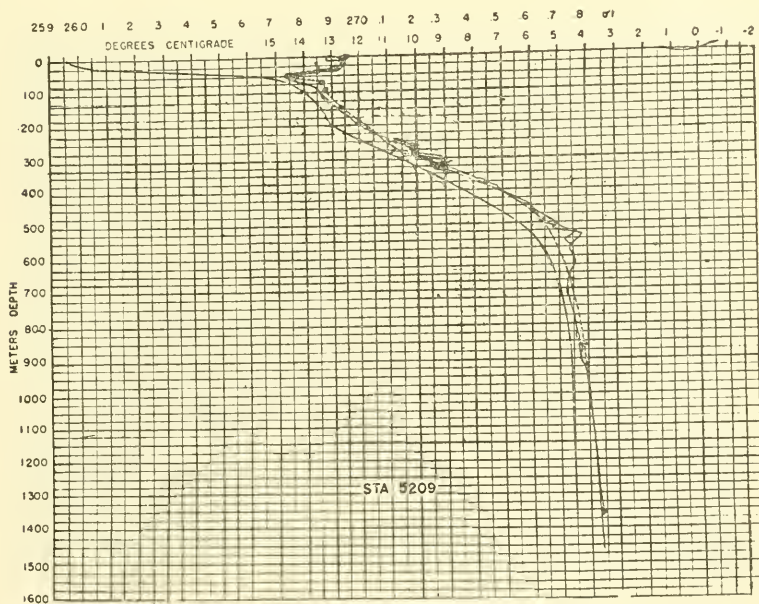


FIGURE 33.—Temperature trace of TD at station 5209; 10 June 1953; $44^{\circ}24'$ N., $45^{\circ}58'$ W.

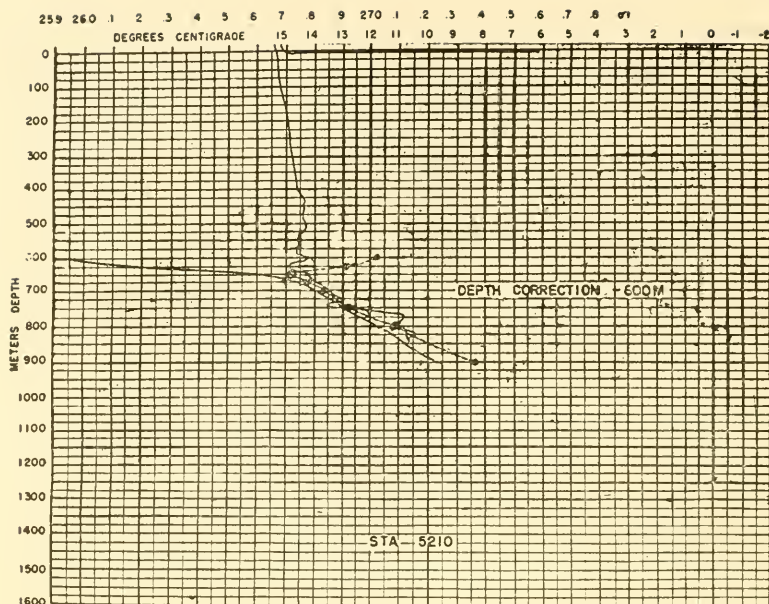


FIGURE 34.—Temperature trace of TD at station 5210; 10-11 June 1953; $44^{\circ}26'$ N., $46^{\circ}24'$ W.

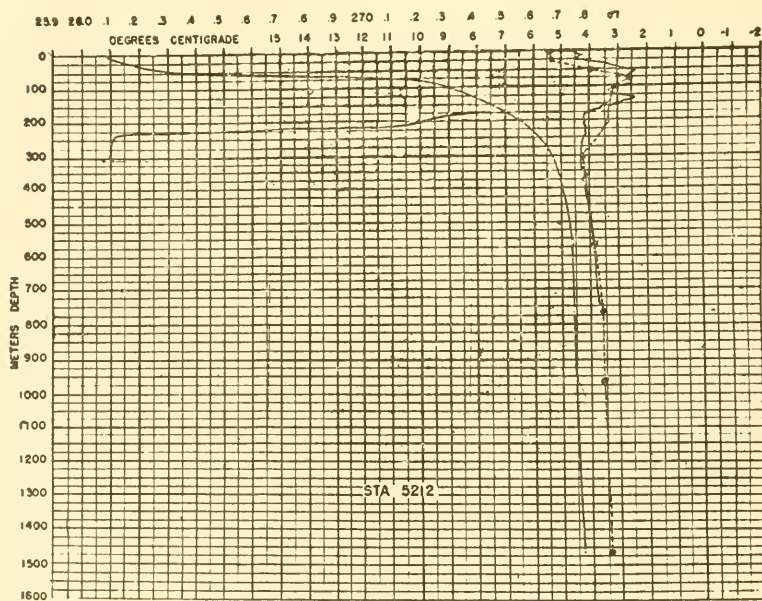


FIGURE 35.—Temperature trace of TD at station 5212; 11 June 1953; $44^{\circ}43.5'$ N., $47^{\circ}32'$ W.

the cast with the reversing thermometers; in figure 35 where the record is interpreted as indicating failure to extend the downtrace after reaching about 750 meters with no uptrace; and in figure 32 where the trace cannot be followed beyond about 230 meters on the downtrace.

Where the uptrace and downtrace are similar in shape but do not coincide such as at the secondary minimum and maximum at 250 and 325 meters in figure 22 the reason may be time lag in the instrument (slow response) or time variation in the temperature of the water. However, if it were due to slow response of the instrument the uptrace and downtrace would not coincide as they do at such abrupt changes as the temperature minimum at about 65 meters in figure 29. Also such temperature differences as are shown by the two traces in figure 24 at the temperature minimum at 375 meters cannot be explained by slow response of the instrument. As the area of operation is one of great contrasts possibly some of the discrepancies are the recording of geographical (horizontal) differences. Most of the differences between the uptraces and downtraces, however, are considered to be the result of time variations such as would be produced by internal waves since there are numerous cases in which the uptrace and the downtrace are both higher or both lower than the temperature indicated by reversing thermometer. As the reversing thermometer is a slow response instrument which gives a reading depending on the average temperature of its surroundings for the several minutes prior to its reversal, cases in which the temperature by reversing thermometer is not included between the traces are indicative of short period internal waves where the period is of the order of magnitude of the length of time required for the reversing thermometer to attain equilibrium. Where the reversing thermometer temperature is included between the traces there is no indication as to the length of period of the internal waves involved.

The temperature differences between the uptraces and downtraces and the reversing thermometer readings are small in the deeper water. Geographically, it would seem that the large variations extend deeper at stations in the margins of the Atlantic Current than at stations in Labrador Current water with intermediate depths at stations in mixed water. This apparent difference may not be real, however, since the vertical temperature gradient at a given depth is greater in Atlantic Current water than in Labrador Current water and for a given amplitude of vertical movement the temperature changes would be greater.

Inasmuch as the internal wave involves a periodic vertical displacement of water the result is not only a fluctuation in temperature at a particular point but presumably also a fluctuation in salinity and density with a resulting undulation of the dynamic topography of the sea surface and of the assumed motionless surface to which it is re-

ferred. The work of Fjeldstad, Defant, and others³ indicates that an unlimited number of internal waves of differing phase, period and order may be present in the usual sea condition of continuous vertical density gradient. Such analyses as have been made emphasize the waves of longer period, of the order of magnitude of several hours. This may be because of the sampling methods which so far have been available. Figures 22 to 35 indicate that much shorter period waves, of the order of magnitude of several minutes, also are present. For the study of such waves a rapid response water sampler or salinity measuring device is necessary. The Nansen type water bottle is not a rapid flushing bottle but instead requires somewhat more than 6 minutes to trap a sample representative of its surroundings.⁴ Evidently then it cannot be used with a rapid response thermometer such as the TD. However, just as the reversing thermometer averages the temperature over the several minutes prior to its reversal, so also does the Nansen type water bottle and the two together eliminate many of the uncertainties in dynamic topography which might otherwise arise from short period internal waves. The undulations with periods of several hours, of course, remain in the topography developed from measurements made with the reversing thermometer-Nansen type bottle methods and may be the cause of some of the peculiarities in our topographic charts which have been difficult to explain. While remembering that the dynamic topographic charts have been in sufficiently good accord with observed drifts of bergs to be of great practical use, the degree of reliance which may be placed on such computations as volume and heat transport and mean temperature derived from such observations is in doubt.

It has been found that in the Grand Banks region Labrador Current water and Atlantic Current water are present as water masses having characteristic temperature-salinity relationships and in addition the mixed water formed from these parent water masses is usually present in sufficiently uniform proportions of each of its components so that it may be regarded as a virtual water mass. Of the data collected during 1953, those from the first and fourth surveys were from the same area which has been the source of the T-S data in the past and so provide a good basis for comparison. Except for its southern end, the area covered by the second survey, which included the northeastern slope of the Grand Banks, is north of the area from which earlier data have been considered. The third survey was comprised of the Bonavista triangle only and was not analyzed for

³ As summarized by Sverdrup, Johnson, and Fleming in "The Oceans" pp. 585-602 (1942), Prentice-Hall, New York.

⁴ See R. L. I. Fjarlie "A seawater sampling bottle" Pacific Oceanographic Group, Joint Committee on Oceanography P. O. G. file N7-7 (15 Aug 1952) Nanaimo, B.C., wherein the author describes the performance of a new bottle designed to flush rapidly. He compared the new bottle with other types of bottles at 0, 2, 4, and 6 meters. The salinity at 2 meters was essentially the same as at the surface. A replot of his data for only the 4 and 6 meter levels shows the Nansen type bottle to require about 6 minutes to trap samples of the same salinity trapped by the new bottle under the existing sea conditions (not stated).

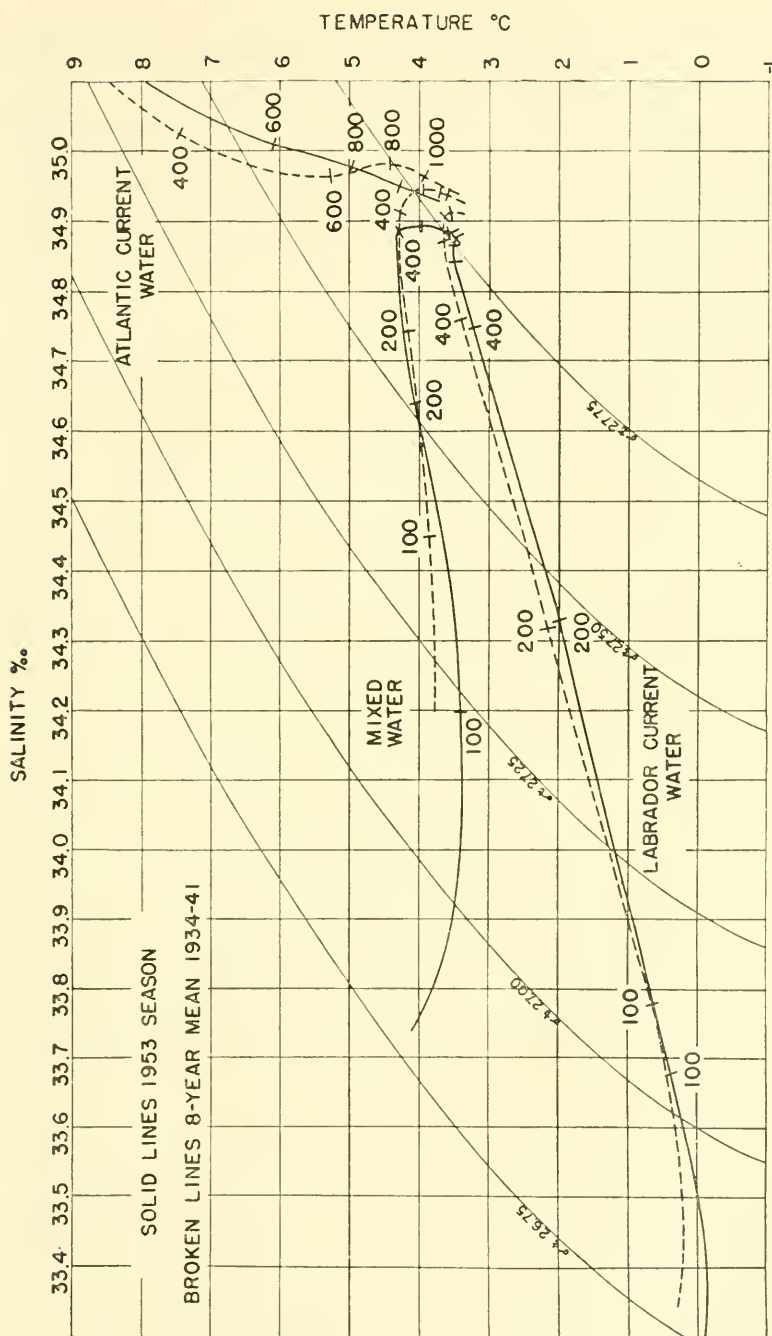


FIGURE 36.—Temperature-salinity relationships for Labrador Current water, Atlantic Current water, and mixed water found in the Grand Banks region. Solid lines show conditions during the 1953 season and broken lines represent the 8-year mean for the period 1934-41. An approximate depth scale in meters is given.

T-S relationships as being probably too far removed from the source of the other data for direct comparison. The results of the first, second, and fourth surveys were examined separately and it was found that while there were differences from survey to survey these differences were small. However, because of geographical differences only the Atlantic Current water stations of the second survey were included in the average values for 1953. These T-S relationships for the three water masses are shown in figure 36 as solid lines in comparison with the averages for the 8-year period 1934-41 which are shown as broken lines.

The Labrador Current water was somewhat fresher from 50 to 100 meters, somewhat colder from 100 to 400 meters, and both colder and fresher below 400 meters than the 8-year mean. The mixed water was fresher than the 8-year mean at all levels. The Atlantic Current water appeared to be warmer and saltier above about 800 meters, and warmer and fresher below that level, than the 8-year mean. Again in 1953 the salinity minimum at a temperature of about 6° was not apparent in the mean for the year although some individual station curves exhibited it. If this minimum is the result of mixing and is, as has been assumed, a characteristic of the outer margins of the Atlantic Current water mass, the minimum may have disappeared from the yearly average because of a larger number of stations taken farther into the Atlantic Current water mass.

The number of atypical stations, that is, stations which do not definitely fall into one of the water mass categories, was larger than usual. In the first survey there were 6 stations between Atlantic Current water and mixed water characteristics and 9 such stations in the fourth survey. In addition there were evidences that boundaries between water masses were not vertical, with one water mass over a different water mass at each of several stations. The Labrador Current water (for which more stations were available than for other water masses) was saltier during the second survey than either the first or fourth surveys and except for the 50-meter level it was fresher during the first survey than during the fourth. The differences were small enough to be of doubtful significance.

As a check on whether the mixed water was or was not a virtual water mass, the probable departures of temperature and salinity at a given level at an individual station, from the temperature and salinity at that level on the T-S curves for 1953 shown in figure 36 were computed for each level for each water mass. These probable departures were then used as the axes of ellipses of uncertainty constructed with their centers at the appropriate points on the T-S curves. Level for level the ellipses for Labrador Current water and mixed water did not overlap except at 600 meters and below; and for mixed water and Atlantic Current water they did not overlap except at the 1,500 meter level.

Some interest has been expressed as to whether there has been any progressive change in the salinity of the North Atlantic eddy over the years. Small consistent differential changes would have a marked effect on circulation. For the postwar years 1948-53 the T-S points representing the year's mean have been plotted for each year and each level for each of the three water masses found in the Grand Banks region. Such a period of 6 years is too short to reveal any gradual shift in a particular T-S point as the annual excursions of the point are greater than any anticipated permanent shift of the point.

In each water mass the excursions were greatest in the upper levels and decreased with increasing depth. In the Labrador Current water the major axis of the excursion pattern was parallel to the characteristic T-S curve of the water mass down to about 200 meters, indicating changes in density for a specific level in this depth range. Below about 200 meters the fluctuations were more nearly isopycnal. No such regularity was apparent in the plots for the mixed water. In the Atlantic Current water the major axis of the excursion pattern was roughly parallel to the characteristic T-S curve down to about 800 meters but below that depth there was no pronounced major axis in the pattern. Caution must be used in interpreting these measurements made in Atlantic Current water because, unlike the measurements in the other two water masses, these sample only the outer part of the North Atlantic eddy and so must contain a varying proportion of marginal stations from year to year. Thus while the geographical distribution of the sampling is roughly the same from year to year, the fluctuations recorded may represent fluctuations in geographical position of the margins of the North Atlantic eddy rather than fluctuations in its T-S characteristics.

In comparison with the 8-year mean for the period 1934-41, the postwar observations in the Labrador Current water were fresher and slightly colder in the upper 200 meters and fresher below 400 meters. The mixed water was fresher at all levels and the Atlantic Current water was warmer and fresher below about 800 meters.

In earlier Bulletins of this series attempts have been made to describe numerically the fluctuations in the position of the cold wall and to relate these fluctuations to other phenomena. As the cold wall is not vertical the outer margin of Atlantic Current water has been used. This has been defined as the horizontal projection of the line along which a temperature of 6° corresponds to a salinity of $34.95^{\circ}/\text{‰}$. This border is serpentine in shape and its position has been characterized by measuring the area northwestward of it between the border and fixed rumb lines (the 45th parallel, the 49th meridian from 45° N., to 43° N., and a line from 43° N., 49° W., through 42° N., 47° W.). Thus, as the border moves toward the Grand Banks the area decreases. It was assumed that the position taken up by the border was determined partly by forces associated with the Labrador Current and

partly by forces associated with the North Atlantic eddy. It was assumed that the area would be increased by 10,000 square kilometers for each million cubic meters per second volume of flow of the Labrador Current entering the area past section U. After subtracting such an amount from the area to obtain an adjusted area, A, this adjusted area was considered to represent the effects of causes associated with the Gulf Stream system. Assuming that these causes were related to the difference in sea level between Bermuda and Charleston, S. C., the fluctuations in A would be related to the fluctuations in this sea level difference. If sea level at Charleston minus the departure from average sea level at Bermuda, expressed in feet, is H and A, expressed in units of 10,000 square kilometers, is the adjusted area 13½ months later, 27 surveys made during the ice patrol seasons 1934-41 give the expression

$$A=6.8 (H-5.07)+1.34$$

No surveys were made during the years 1942-47. Ten surveys made during 1948-52 did not agree with the above relationship but followed approximately the same relationship if a time lag of 11½ months were used. Combining all 37 surveys and using the phase difference of 13½ months for the prewar data and 11½ months for the postwar data the expression became

$$A=6.97(H-5.07)+1.67$$

However, the correlation was much poorer and it is evident that the full explanation involves more than has so far been considered.

In 1953, the first survey gave a gross area of 9.63 with an adjusted area A of 6.67 and in the fourth survey the gross area measured 6.95 for an adjusted area of 3.22, both of which are widely different from the values of A computed with either of the above formulae. The phase difference could have been either 11½ months or 13½ months during 1953.

The postwar data now include 12 surveys with 4 each made during April, May and June. The means of these actual values of A plotted on the curve of postwar averages of the Charleston minus Bermuda departure show the following possible time lag correlations: 1 month negative; 2½ months positive; 4 months negative; 6 months positive; 9½ months negative; 11½ months positive; 13 months negative; and 14½ months positive. Examining each year, survey by survey, shows only one of these (11½ months positive) to have no years where the sign of the correlation was contradictory. The quantity (H-5.07) has continued to have low values whereas the actual value of A has remained high. A decreasing value of (H-5.07) is interpreted to mean an increasing activity in the North Atlantic eddy. If the adjusted area A remains high it may be because of an anomalous failure of the Labrador Current to increase. Another possible interpretation is that the Atlantic Current water has decreased in salinity in its T-S

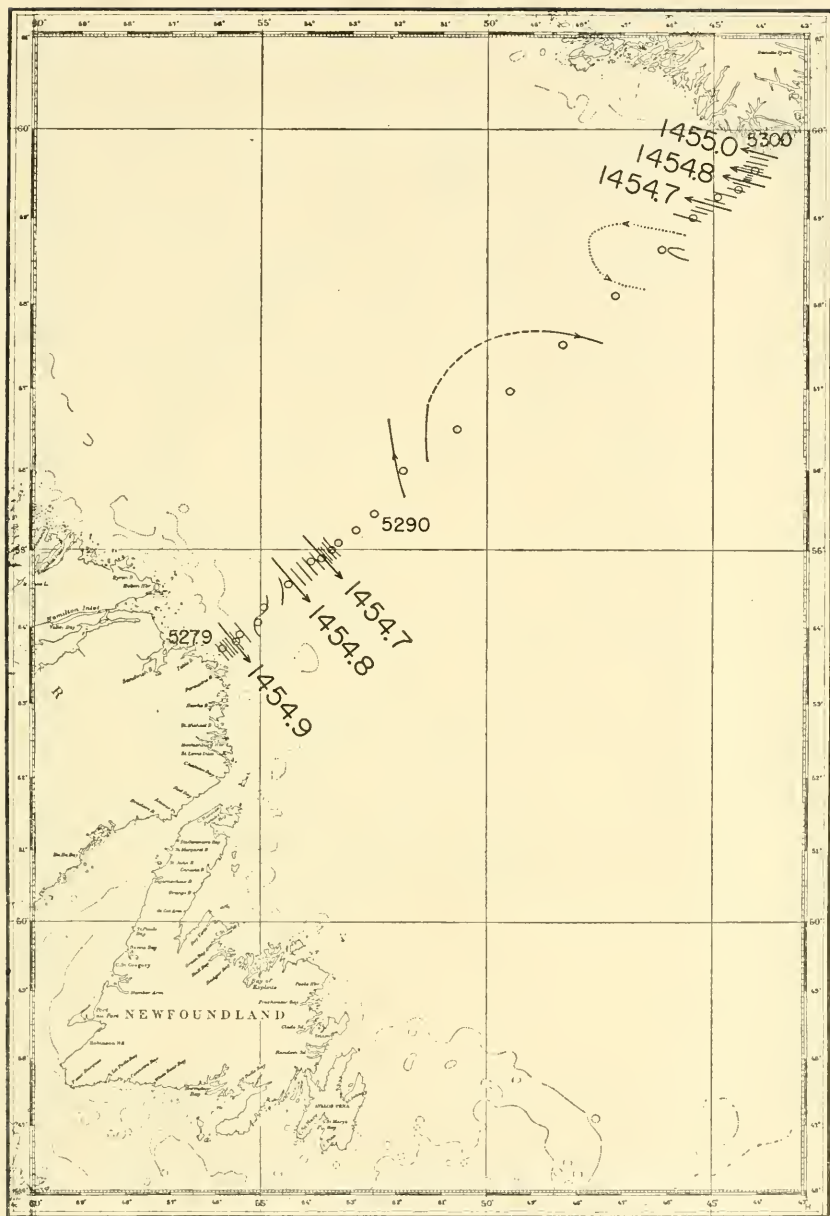


FIGURE 37.—Dynamic topography of the sea surface relative to the 1,500-decibar surface from data collected 16–20 July 1953. Oceanographic station positions are indicated and the station numbers given at turning points.

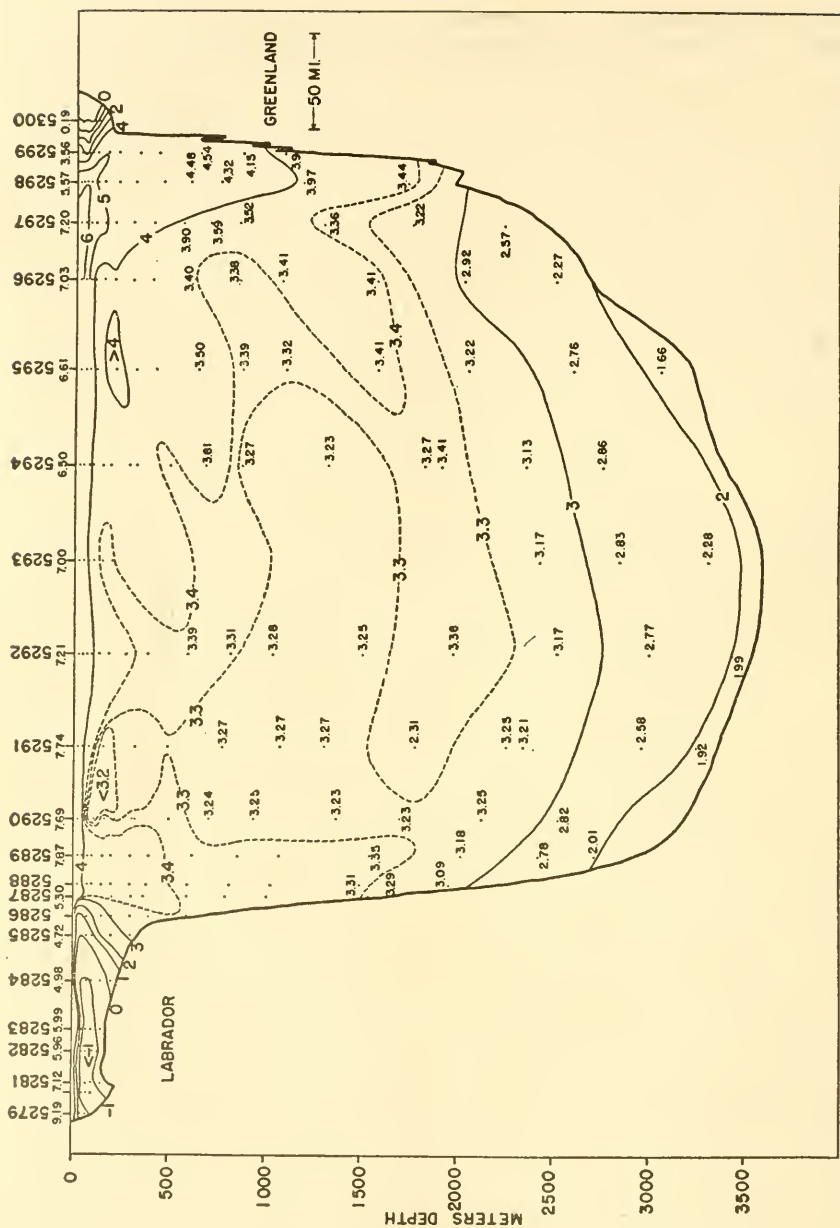
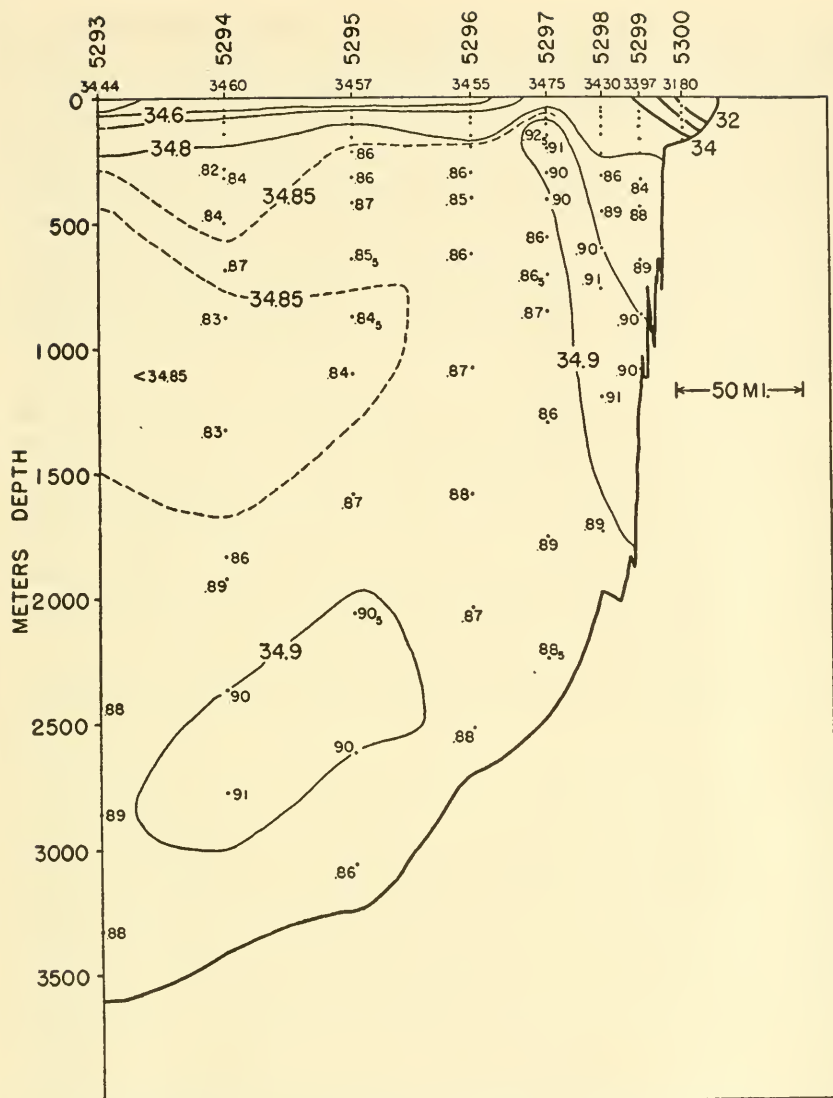


FIGURE 38.—Temperature distribution between South Wolf Island, Labrador, and Cape Farewell, Greenland, 16-20 July 1953.



relationship so that one must get farther into the North Atlantic eddy to find the boundary criterion of 34.95‰ at 6° .

Figure 20, presented earlier in illustration of the interpretation of the volume transports found at various sections of the Labrador Current, also shows schematically the circulation in part of the Labrador Sea as deduced from the observations made during the post-season cruise. Figure 37 shows the dynamic topography of the sea surface during the 1953 postseason cruise, in the vicinity of the section from South Wolf Island, Labrador, to Cape Farewell, Greenland. Figure 38 shows the temperature distribution along this section and figure 39 shows the salinity distribution along the Greenland end of this section.

The dynamic topography shown in figure 37 has a pattern similar to that found in 1952, with the Labrador Current having two bands separated by the shoal off Hamilton Inlet, and with the possibility of a cyclonic eddy offshore of the outermost band and located between it and what appears to be the northwestwardmost margins of the North Atlantic eddy. As the water in the margin of the North Atlantic eddy moved eastward it again was joined on the Greenland side by water recurving from the West Greenland Current.

Inspection of figure 38 gives some verification of this interpretation of the circulation. The temperature minimum at about 150 meters at stations 5290 and 5291 is an indication that this northward moving water was associated with the Labrador Current and has recurved somewhere southeastward of this section. Farther seaward the warmer temperatures at station 5292 support the identification of this water as being the northwestern margin of the North Atlantic eddy. At station 5295 the temperature maximum of more than 4° indicates that this water has recurved from the warm West Greenland Current somewhere northwestward of this section. Elsewhere in figure 38 the frigid part of the Labrador Current is to be seen over the shelf and the warmer offshore part of the Labrador Current, derived from the West Greenland Current, is defined by the 3.4° isotherm at stations 5287 and 5288. The temperature minimum in the intermediate water in the central part of the section, with a temperature of about 3.25° , was about the mean of the warmer years. During the 7 years 1934-39 and 1950 this minimum was about 3.17° and during the 7 years 1940-41, 1948-49, and 1951-53 the minimum was about 0.10° to 0.15° warmer. The gap in the observations 1942-47 makes it difficult to compare the 8-year series of prewar observations with the 6-year postwar series. In figure 38 the temperature maximum below this minimum is defined by the 3.3° and 3.4° isotherms at about the 2,000-meter level. It is interesting to note that the intermediate minimum and the underlying maximum are still present when the temperatures in situ are converted to potential temperatures. Within the West Greenland Current the cross sectional area with a tempera-

ture greater than 4° is somewhat greater in figure 38 than was found in 1952. The area within the 5° isotherm is about the same as in 1952.

Using temperature as an indicator of the relative magnitude of the contributions of the Irminger Current and the East Greenland Current this increase in the cross sectional area within the 4° isotherm would mean an increase in the Irminger Current component of the West Greenland Current. Figure 39, however, contradicts this and shows no salinity that is even as much as 34.95‰. The salinity maximum found in 1953 was 34.925‰ which is the lowest value found since 1949 when the Irminger Current component of the West Greenland Current disappeared from this vicinity. On the basis of temperature alone and assuming that the West Greenland Current off Cape Farewell is made up exclusively of an East Greenland Current component of constant mean temperature of 3.2° and an Irminger Current component of constant mean temperature of 5.5° the observed volume transport of the West Greenland Current of 7.23 with a heat transport of 27.92 and a mean temperature of 3.86 may be broken down into an East Greenland Current component of 5.15 volume of flow (compared with a seasonal normal of 1.57) and an Irminger Current component of 2.08 (compared with a seasonal normal volume of 2.95), as shown in figure 20. The low salinity maximum, however, indicates that the warm water involved is not Irminger Current water but more probably is a direct contribution of water from the outer margins of the North Atlantic eddy.

As mentioned earlier, 1,500 decibars was used as the reference surface in this section across the Labrador Sea in order to make the resulting dynamic topography, velocities, and transports comparable with the results of earlier work. Examination of the complete velocity section shows that using this reference surface the net volume transport across the section from South Wolf Island to Cape Farewell is 3.67 northwesterly. There is normally a small net contribution into the Baffin Bay-Labrador Sea system through the northern openings and it is not reasonable to account for such a large northwesterly transport by sinking and outflow below the reference surface. Analysis of the computations shows the net northwesterly transport to be present at all levels with the maximum rate occurring in the upper 300 meters and decreasing with increasing depth to the reference surface. A deeper surface was suggested as being more nearly motionless. The volume of flow was recomputed using for reference the 2,000-decibar surface, which gave 3.13 net northwesterly and again using for reference the 2,500-decibar surface which gave 1.77 net southeasterly. Although the motionless surface was probably undulatory the most nearly motionless surface seems to have been between 2,000 and 2,500 meters.

Using the 2,500-decibar surface produces little change in the computed values of the West Greenland Current, giving a value of 7.35

instead of 7.23 for the volume transport (divided on the basis of temperature as 5.31 East Greenland Current and 2.04 Irminger Current) 3.84 instead of 3.86 for the mean temperature and 28.22 instead of 27.92 for the heat transport. A greater change is produced in the computed values for the Labrador Current, however, giving 6.41 instead of 5.02 for the volume transport, 2.64 instead of 2.43 for the mean temperature, and 16.94 instead of 12.19 for the heat transport. These values, using 2,500 decibars as the reference surface, are very close to the values obtained in 1952 when 1,500 decibars was used as the reference surface and are considered to be more nearly the true values than those derived in reference to the 1,500-decibar surface.

Phosphorus in the sea forms an important part of the nutrient salts and its concentration in that form is subject to alteration, as it passes through the life cycle, with fluctuations in the activity of marine life. The concentration of total phosphorus, however, should be a reasonably conservative property of sea water. Until recent years comparatively little work has been done on total phosphorus. Ocean-wide differences have been known to exist. For instance, that there is a lower concentration in the Atlantic than in the Pacific. There seemed to be a possibility of using total phosphorus as a tracer which might be of use in identifying the water in the high salinity core of the West Greenland Current as being water supplied from the North Atlantic eddy by the Irminger Current or as water recirculated from the south central Labrador Sea. If total phosphorus could be used as a tracer then the three water masses found in the Grand Banks region, or at least the Atlantic Current water and the Labrador Current water, were expected to show characteristic differences in total phosphorus. Accordingly during the May survey of the Grand Banks region in 1952, samples were taken from all levels at most of the stations and during July 1952, samples were taken from all levels at all stations comprising the section from South Wolf Island, Labrador to Cape Farewell, Greenland. Similar sampling also was carried out during the 1953 occupation of this section across the Labrador Sea. The results of the determinations of total phosphorus concentration in the samples (carried out by personnel of the Woods Hole Oceanographic Institution ⁵) are tabulated at the end of the usual table of oceanographic data.

The stations in the Grand Banks survey were classified as to water mass according to their temperature-salinity characteristics. As there is very little overlap between Labrador Current water and Atlantic Current water in either salinity or temperature it was considered that a more illuminating plot would result if phosphorus

⁵ With only minor modifications, methods and procedures were as reported by Harvey, H. W., in "The estimation of phosphate and of total phosphorus in sea waters," *Journ. Mar. Biol. Assoc.*, vol. XXVII, pp. 337-359 (1948), Plymouth, England. Recent work at the Woods Hole Oceanographic Institution (unpublished) indicates the probable error in the determinations to be about ± 10 percent.

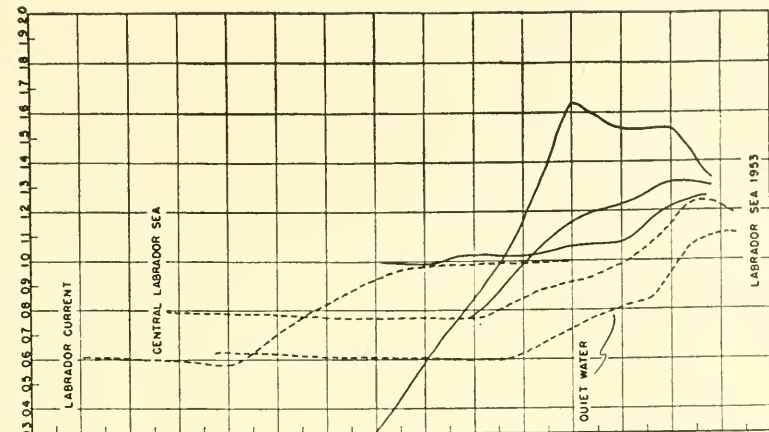


FIGURE 42.—Mean curves showing the relationship between total phosphorus and potential density found in the South Wolf Island-Cape Farewell section 16-20 July 1953, compared with the characteristic Grand Banks water mass curves.

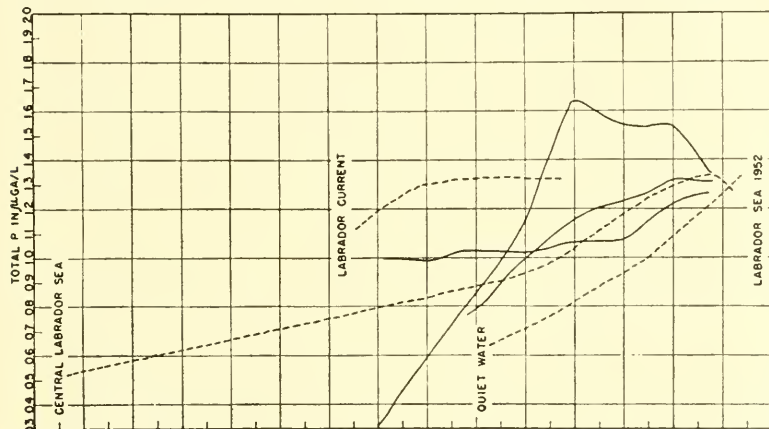


FIGURE 41.—Mean curves showing the relationship between total phosphorus and potential density found in the South Wolf Island-Cape Farewell section 17-20 July 1952, compared with the characteristic Grand Banks water mass curves.

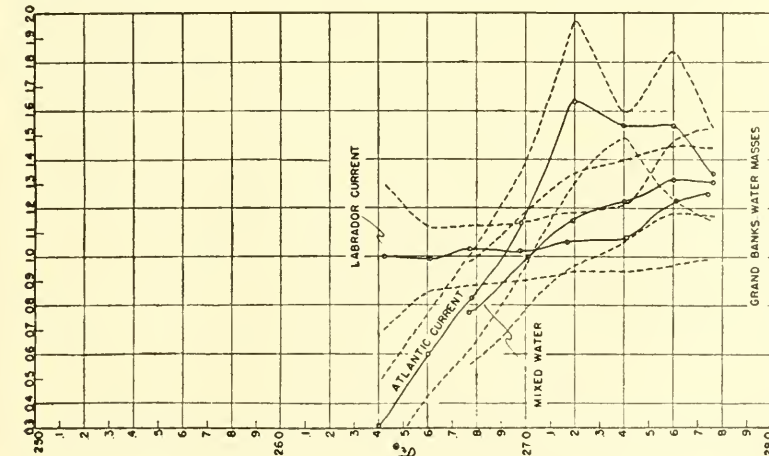


FIGURE 40.—Characteristic phosphorus-density curves for water masses found in the Grand Banks region in May 1952.

were plotted as a function of some property more uniformly common to all water masses. Considering the possibility of changes in depth as the water moved from one geographical location to another, potential density⁶ was chosen as the property against which to plot the phosphorus concentration. The individual station curves did seem to have shapes characteristic of the water masses. Average curves for each of the water masses were then drawn and the probable departure of individual observations from the average curve computed. The average curves are shown in figure 40 as solid lines bracketed by broken lines indicating the probable departure. Thus the Labrador Current water had a practically constant concentration of total phosphorus of about 1.0 to 1.1 microgram-atoms per liter down to intermediate depths below which there was an increase to about 1.25 microgram-atoms per liter in the deep water. The Atlantic Current water had much lower values near the surface, increased to an intermediate maximum of more than 1.5 $\mu\text{ga/L}$, and then decreased approaching in deep water the values in the Labrador Current water. The mixed water showed a relationship roughly intermediate between the Atlantic Current water and the Labrador Current water, and, like the T-S characteristic, closer to the curve of Labrador Current water than the curve of Atlantic Current water.

Thus the concentration of total phosphorus was shown to be a water mass tracer in the Grand Banks region, but not a very good tracer. The data for the 1952 occupation of the section across the Labrador Sea were then plotted and the stations fell into three groups. Stations on the Labrador shelf formed one group in which the phosphorus concentration was constant but about 0.3 $\mu\text{ga/L}$ higher than the Labrador Current water in the Grand Banks region. The stations in the central Labrador Sea and West Greenland Current formed a second group similar to but slightly lower in concentration than the mixed water of the Grand Banks region. Four stations, two on each side of the central Labrador Sea, formed a third group in which the concentration was the lowest of the entire section. Figure 41 shows average curves representing these groups along with the Grand Banks curves for comparison. The data for the 1953 occupation of the section across the Labrador Sea have been similarly treated and the results shown in figure 42. Each of the three groups showed lower concentrations in 1953 than in 1952 but the greatest change was in the Labrador Current water.⁷ In 1952

⁶ $\sigma_{t\theta}$ where $t\theta$ is the temperature a water particle would have if the particle were adiabatically reduced to atmospheric pressure, and where $\sigma_{t\theta}$ is 1,000 (density-1) at atmospheric pressure and temperature $t\theta$.

⁷ The decided differences in the concentration of total phosphorus in the Labrador Current between the Labrador coast and the Grand Banks region the same year (July and May) and between 1952 and 1953 in the same location off South Wolf Island at the same time of year brings up additional unanswered questions as to variations with time and the mechanisms by which the concentration is altered. Remembering that the samples from the Grand Banks region were taken from locations distant from land and that those off South Wolf Island were taken from locations relatively near the beach it is suggested that the phosphorus concentration may be increased locally by fecal products from birds being washed into the sea from adjacent rookeries and from seals which whelp on the ice over the shelf.

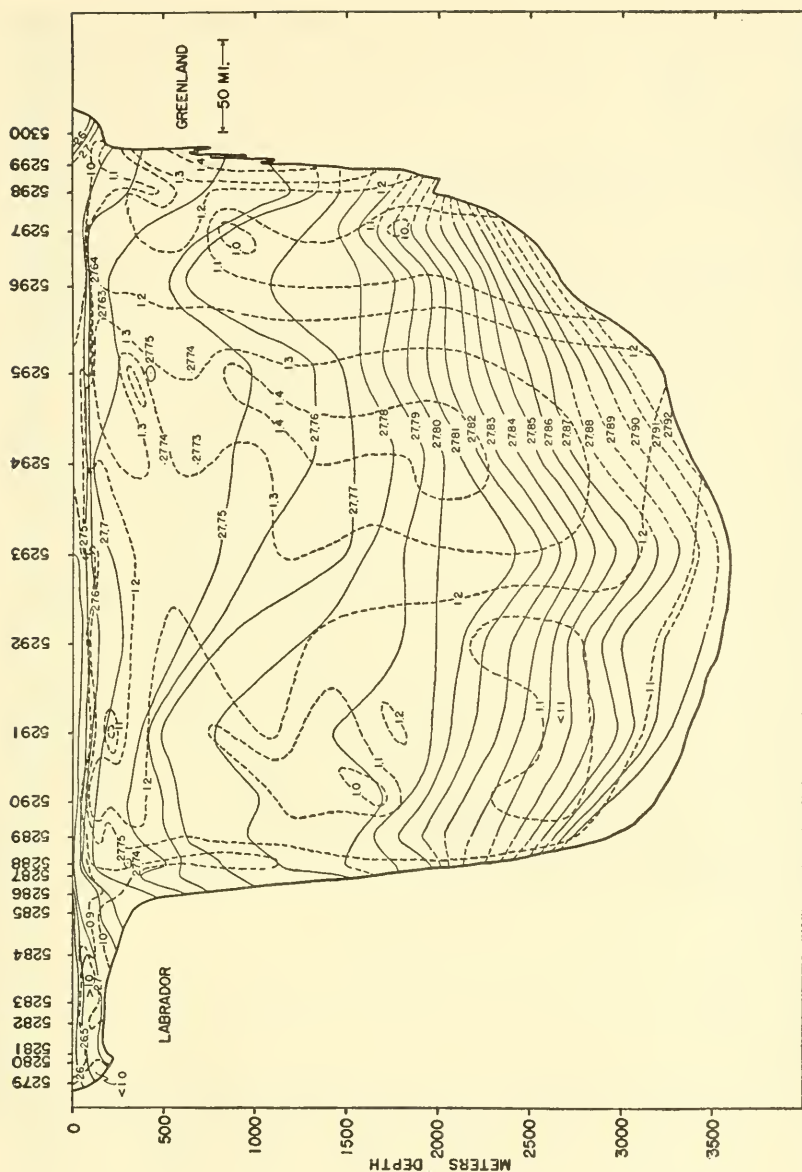


Figure 44.—Distribution of total phosphorus between South Wolf Island, Labrador, and Cape Farewell, Greenland, 16-20 July 1953. Concentration is given in microgram-atoms per liter. Solid lines show isentropic surfaces of equal σ_{49} .

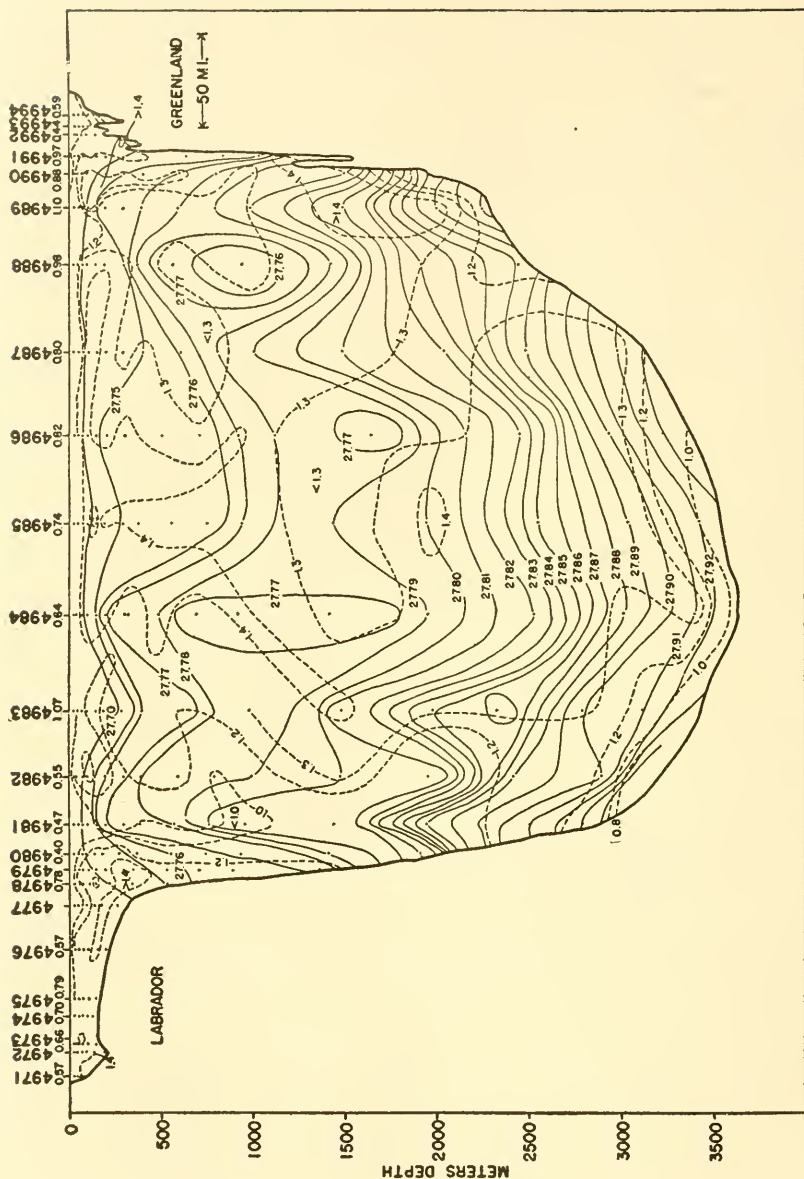


FIGURE 43.—Distribution of total phosphorus between South Wolf Island, Labrador, and Cape Farewell, Greenland, 17–20 July 1952. Concentration is given in microgram-atoms per liter. Solid lines show isentropic surfaces of equal σ_t .

the station containing the salinity maximum in the West Greenland Current was indistinguishable from the others in the group from the Central Labrador Sea and West Greenland Current. In 1953 the station containing the salinity maximum was lower in phosphorus than the group from the central Labrador Sea and West Greenland Current and close to but somewhat higher than the low phosphorus group.

From the observations available, and on the basis of the characteristic curves shown in figure 40, it is not possible to identify the high salinity core of the West Greenland Current off Cape Farewell in either 1952 or 1953 as having been contributed by the Irminger Current. Whether this is because of a change in the characteristic total phosphorus distribution which takes place during the long journey from the Grand Banks to Cape Farewell by way of Iceland, or because the salinity maximum was not contributed by the Irminger Current, cannot be stated from the information now available.

The distribution of total phosphorus concentration along the section across the Labrador Sea found in 1952 and 1953 is shown in figures 43 and 44. Lines of equal phosphorus are shown broken and the isentropic surfaces of equal σ_{θ} are shown as solid lines. While, as noted above, the concentration was less in general in 1953 than in 1952, figures 43 and 44 display some features of distribution in common. There is a maximum in the central part of the section in the intermediate water which grades to lower values at the bottom and to minima on each side. These minima reach to the surface near the offshore boundaries of the swifter horizontal circulation. Shoreward of these minima there are maxima near the continental slopes. A considerably smaller concentration is present in the upper 50 meters.

SUMMARY

1. The surface circulation in the Grand Banks region during the ice patrol season of 1953 has been discussed on the basis of four dynamic topographic surveys which indicated the presence of currents adequate to transport bergs to areas of potential hazard to the steamer lanes if bergs had entered the surveyed area from the north.

2. The circulation in the upper 1,000 meters in the Grand Banks region has been considered in greater detail by presentation of the volume and heat transports, mean temperature and minimum temperature observed in 1953 during 19 occupations of 10 selected sections across the Labrador Current. These have been compared with seasonal normal values where such normals are available and the figures for the 1953 deficiency in volume and heat transport have been given.

3. The 12 occupations of the Bonavista triangle made during the past 6 years have been summarized as to volume of flow, mean temper-

ature, minimum observed temperature, and heat transport for each of the three sides and approximate normal seasonal variation relationships developed for these functions and for the percentage of the volume transport following the eastern branch of the Labrador Current.

4. A new self-contained rapid response subsurface thermograph, which records temperature against depth down to 1,800 meters, has been described and the results of field tests have been discussed. Fourteen traces obtained before accidental destruction of the instrument have been shown with corresponding observations by reversing thermometers. The results indicate the presence of short period internal waves which are averaged out in the reversing thermometer-Nansen water bottle technic.

5. The temperature-salinity characteristics of the Labrador Current water mixed water and Atlantic Current water found in the Grand Banks region in 1953 have been compared with the 8-year mean for the period 1934-41. The year-to-year changes in the position of the T-S points for several levels in each of the 3 water masses were investigated for the 6 postwar years 1948-53 but any steady trend which may be present was masked by the large year-to-year excursions of the points. Some slight freshening in the deeper levels, compared to prewar observations, was noted.

6. Two more surveys in 1953 were added to the study of the relationship which is presumed to exist between the location of the northern boundary of Atlantic Current water in the Grand Banks region, the strength of the Labrador Current and the strength of the North Atlantic eddy as indicated by the difference in sea level between Bermuda and Charleston. As with all the postwar observations, the 1953 measurements gave a poor agreement with the relationship developed for the prewar observations.

7. The 1953 repetition of the section from South Wolf Island, Labrador, to Cape Farewell, Greenland, has been examined and the results presented. The abnormally vigorous circulation in the Labrador Sea which has characterized the last few years continued in 1953. The temperature minimum of the intermediate water was found to be warmer than during the period 1934-39. In this respect 1953 was like 1940-41 and all the postwar years except 1950. On the basis of the salinity maximum in the West Greenland Current the Irminger Current contribution to that current was judged to be negligibly small in 1953. The temperature of this portion of the West Greenland Current, however, remained fairly warm, so that on the basis of heat transport and assumed constant mean temperatures of the contributory currents the Irminger Current contribution was about two-thirds of its normal volume transport.

8. From measurements made on samples collected in the Grand Banks region in 1952 and from the section across the Labrador Sea in 1952 and 1953 it is concluded that the concentration of total phosphorous is roughly characteristic of water masses though of doubtful utility as a tracer of water masses. The distribution of phosphorous found in the southern Labrador Sea has been described.

TABLE OF OCEANOGRAPHIC DATA

The data collected during 1953 are tabulated below. The individual station headings give the station number, date, geographical position, depth of water, and the dynamic height of the sea surface used in the construction of the dynamic topographic charts shown in figures 14, 15, 16, 17, 19, and 37. The depths of water are rough approximations, being uncorrected sonic soundings based on a sounding velocity of 800 fathoms per second and containing an additional mechanical speed error of about $\frac{1}{60}$. Where the depths of scaled values are enclosed in parentheses, the data are based on extrapolated vertical distribution curves of temperature or salinity or both. Asterisks appearing before observed temperatures indicate that these temperatures were determined from the depth of reversal and the corrected reading of an unprotected thermometer. The symbol σ_t signifies 1,000 (density—1) at atmospheric pressure and temperature t .

Table of Oceanographic Data

STATIONS OCCUPIED IN 1953

Observed values			Scaled values				σ_t	Observed values			Scaled values				σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters		Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰			
Station 4995; Apr. 3; latitude 42°04.5' N., longitude 51°53' W.; depth 3,658 meters; dynamic height 971.171															
0-----	11.83	34.05	0-----	11.83	34.05	25.91	0-----	3.33	33.10	0-----	3.33	33.10	26.35		
25-----	11.88	34.88	25-----	11.88	34.88	26.54	25-----	1.65	33.31	25-----	1.65	33.31	26.66		
50-----	11.17	35.16	50-----	11.17	35.16	26.89	50-----	0.90	33.44	50-----	0.90	33.44	26.82		
75-----	12.23	35.42	75-----	12.23	35.42	26.89	75-----	0.72	33.54	75-----	0.72	33.54	26.91		
99-----	12.15	35.40	100-----	12.15	35.40	26.89	100-----	0.52	33.74	100-----	0.52	33.74	27.08		
149-----	11.80	35.32	150-----	11.80	35.32	26.90	150-----	1.33	34.06	150-----	1.33	34.06	27.29		
199-----	11.90	35.36	200-----	11.90	35.36	26.91	199-----	2.56	34.37	200-----	2.60	34.37	27.44		
298-----	7.88	34.82	300-----	7.85	34.82	27.18	299-----	4.26	34.75	300-----	4.30	34.75	27.58		
342-----	7.84	34.95	400-----	6.45	34.86	27.40	423-----	*4.33	34.90	400-----	4.35	34.79	27.60		
513-----	4.03	34.70	600-----	4.10	34.80	27.64	634-----	4.30	34.95	600-----	4.30	34.84	27.65		
684-----	4.17	34.88	800-----	4.00	34.90	27.73	845-----	3.87	34.92	800-----	3.95	34.83	27.67		
866-----	3.90	34.90	1,000---	3.75	34.90	27.75	1,057---	3.54	34.89	1,000---	3.60	34.80	27.69		
1,341---	3.50	34.88					1,585---	3.46	34.91						

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 4997; Apr. 3; latitude 42°21' N., longitude 51°31' W.; depth 2,926 meters; dynamic height 971.079							
0	5.79	33.56	0	5.79	33.56	26.46	
22	7.29	34.09	25	7.40	34.12	26.69	
43	8.12	34.32	50	8.50	34.43	26.77	
65	9.72	34.80	75	10.45	34.95	26.85	
87	11.00	35.11	100	11.05	35.22	26.95	
130	11.06	35.35	150	10.50	35.30	27.12	
173	9.65	35.20	200	8.65	35.08	27.25	
280	5.59	34.68	300	4.55	34.57	27.41	
328	*3.34	34.44	400	3.20	34.52	27.51	
500	3.12	34.66	600	3.30	34.74	27.67	
679	3.45	34.78	800	3.50	34.81	27.71	
862	3.50	34.82	1,000	3.50	34.83	27.72	
1,340	3.48	34.84					
Station 4998; Apr. 3-4; latitude 42°48.5' N., longitude 50°54' W.; depth 1,326 meters; dynamic height 971.078							
0	0.92	33.00	0	0.92	33.00	26.47	
22	-0.13	33.22	25	-0.15	33.24	26.72	
43	-0.23	33.31	50	-0.20	33.35	26.80	
64	0.06	33.45	75	0.05	33.51	26.93	
85	0.07	33.55	100	0.10	33.58	26.97	
129	0.22	33.62	150	0.35	33.68	27.04	
172	0.52		100	0.75	33.86	27.17	
257	1.23	34.11	300	1.15	34.16	27.38	
320	*1.11	34.18	400	1.95	34.38	27.50	
485	2.79	34.56	600	3.20	34.74	27.68	
653	3.36	34.78	800	3.50	34.80	27.70	
850	3.48	34.80	(1,000)	3.50	34.81	27.71	
Station 4999; Apr. 4; latitude 42°56' N., longitude 50°46' W.; depth 586 meters; dynamic height 971.106							
0	1.17	32.92	0	1.17	32.92	26.39	
23	-0.04	33.12	25	-0.15	33.13	26.63	
45	-0.48	33.20	50	-0.50	33.21	26.71	
68	-0.56	33.24	75	-0.60	33.24	26.73	
90	-0.69	33.24	100	-0.65	33.26	26.75	
136	-0.14	33.46	150	0.05	33.53	26.94	
182	0.36	33.70	200	0.45	33.76	27.10	
272	0.78	33.96	300	1.00	34.05	27.30	
312	*1.15	34.10	400	2.05	34.37	27.49	
477	2.89	34.60					
Station 5000; Apr. 4; latitude 42°59' N., longitude 50°42' W.; depth 163 meters; dynamic height 971.109							
0	1.10	32.97	0	1.10	32.97	26.43	
25	0.20	33.14	25	0.20	33.14	26.62	
49	-0.44	33.22	50	-0.45	33.22	26.71	
74	-0.55	33.26	75	-0.55	33.26	26.74	
99	-0.41	33.32	100	-0.40	33.32	26.79	
148	0.34	33.55	150	0.35	33.55	26.94	
Station 5001; Apr. 4; latitude 43°06' N., longitude 50°36' W.; depth 89 meters; dynamic height 971.088							
0	0.03	33.26	0	0.03	33.26	26.72	
25	0.32	33.45	25	0.32	33.45	26.86	
50	0.65		50	0.65	33.48	26.86	
75	-0.16	33.42	75	-0.16	33.42	26.87	
Station 5002; Apr. 4; latitude 43°20.5' N., longitude 50°18' W.; depth 60 meters; dynamic height 971.141							
0	3.58	32.30	0	3.58	32.30	25.70	
24	2.95	32.46	25	2.90	32.46	25.89	
48	1.91	32.65	50	1.85	32.66	26.13	
Station 5003; Apr. 4; latitude 42°59.5' N., longitude 50°20' W.; depth 86 meters; dynamic height 971.094							
0	2.76	32.50	0	2.76	32.50	25.93	
26	-0.18	33.26	25	-0.20	33.25	26.72	
52	0.23	33.46	50	0.20	33.45	26.87	
78	0.02	33.48	75	0.05	33.48	26.90	
Station 5004; Apr. 4; latitude 42°54.5' N., longitude 50°20' W.; depth 322 meters; dynamic height 971.121							
0	0.13	33.06	0	0.13	33.06	26.56	
25	-0.26	33.07	25	-0.26	33.07	26.58	
50	-0.58	33.07	50	-0.58	33.07	26.59	
74	-0.86	33.13	75	-0.85	33.13	26.65	
99	-0.82	33.17	100	-0.80	33.17	26.68	
149	-0.52	33.34	150	-0.50	33.35	26.82	
198	0.64	33.87	200	0.65	33.88	27.18	
297	1.94	34.36	300	1.95	34.37	27.50	
Station 5005; Apr. 4; latitude 42°44.5' N., longitude 50°21' W.; depth 1356 meters; dynamic height 971.028							
0	4.26	33.25	0	4.26	33.25	26.38	
24	2.75	33.22	25	2.70	33.22	26.51	
49	-0.25	33.18	50	-0.25	33.18	26.67	
73	-0.22	33.33	75	-0.20	33.35	26.80	
97	2.12	33.64	100	2.10	33.66	26.91	
146	1.04	33.87	150	1.05	33.88	27.16	
195	1.12	34.08	200	1.20	34.10	27.33	
292	2.45	34.49	300	2.50	34.50	27.55	
389	2.84	34.62	400	2.85	34.63	27.62	
584	3.37	34.79	600	3.35	34.80	27.71	
781	3.48	34.85	800	3.50	34.85	27.74	
977	3.51	34.88	1,000	3.50	34.88	27.76	

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5006; Apr. 4; latitude 42°22' N., longitude 50°24' W.; depth 2,743 meters; dynamic height 970.965							Station 5009; Apr. 5; latitude 40°52.5' N., longitude 50°11' W.; depth 3,475 meters; dynamic height 971.374						
0-----	3.93	33.23	0-----	3.93	33.23	26.41	0-----	19.61	36.28	0-----	19.61	36.28	25.86
24-----	3.31	33.26	25-----	3.25	33.26	26.49	25-----	19.64	36.28	25-----	19.64	36.28	25.86
49-----	1.99	33.33	50-----	2.00	33.33	26.66	49-----	19.56	36.27	50-----	19.50	36.27	25.88
73-----	1.03	33.53	75-----	1.05	33.54	26.89	74-----	16.88	35.93	75-----	16.85	35.93	26.28
97-----	1.31	33.80	100-----	1.35	33.84	27.11	99-----	15.75	35.81	100-----	15.75	35.81	26.44
146-----	2.66	34.38	150-----	2.70	34.39	27.44	147-----	13.92	35.64	150-----	13.85	35.63	26.72
326-----	3.84	34.82	200-----	3.30	34.54	27.51	196-----	13.23	35.56	200-----	13.20	35.56	26.80
489-----	3.83	34.90	300-----	3.85	34.76	27.63	295-----	12.79	35.63	300-----	12.70	35.62	26.95
652-----	3.78	34.89	400-----	3.85	34.88	27.72	372-----	10.75	35.38	400-----	10.25	35.31	27.17
830-----	3.53	34.89	600-----	3.80	34.90	27.75	566-----	7.74	35.06	600-----	7.20	35.04	27.44
1,302-----	3.45	34.88	800-----	3.55	34.89	27.76	766-----	*5.00	34.98	800-----	4.75	34.98	27.70
			1,000-----	3.50	34.89	27.77	962-----	4.02	34.96	1,000-----	4.00	34.96	27.78
							1,459-----	3.88	34.95				
Station 5007; Apr. 4; latitude 41°54.5' N., longitude 50°25' W.; depth 3,567 meters; dynamic height 971.003							Station 5010; Apr. 5; latitude 42°01.5' N., longitude 49°30' W.; depth 3,109 meters; dynamic height 971.211						
0-----	3.10	33.00	0-----	3.10	33.00	26.31	0-----	15.69	35.90	0-----	15.69	35.90	26.52
22-----	2.03	33.23	25-----	2.00	33.25	26.60	27-----	15.55	36.01	25-----	15.55	36.01	26.65
44-----	1.73	33.38	50-----	1.20	33.39	26.76	54-----	15.24	35.96	50-----	15.25	35.96	26.67
66-----	-0.09	33.42	75-----	-0.10	33.44	26.87	80-----	15.15	35.95	75-----	15.20	35.95	26.67
88-----	-0.02	33.48	100-----	0.25	33.54	26.94	107-----	14.73	35.84	100-----	14.85	35.87	26.69
133-----	1.06	33.63	150-----	1.50	33.98	27.21	160-----	14.52	35.82	150-----	14.60	35.83	26.71
177-----	2.31	34.22	200-----	2.95	34.38	27.41	214-----	13.19	35.65	200-----	13.55	35.70	26.84
265-----	4.16	34.71	300-----	4.15	34.76	27.60	321-----	10.06	35.26	300-----	10.70	35.34	27.11
460-----	4.03	34.86	400-----	4.10	34.84	27.67	397-----	7.93	35.08	400-----	7.85	35.08	27.38
688-----	3.73	34.88	600-----	3.85	34.88	27.72	595-----	5.56	35.02	600-----	5.50	35.02	27.65
915-----	*3.51	34.89	800-----	3.60	34.89	27.76	792-----	4.65	34.99	800-----	4.60	34.99	27.73
1,142-----	3.55	34.88	1,000-----	3.50	34.88	27.76	996-----	4.11	34.95	1,000-----	4.10	34.95	27.76
1,709-----	3.52	34.94					1,516-----	3.73	34.94				
Station 5008; Apr. 5; latitude 41°33' N., longitude 50°27' W.; depth 3,658 meters; dynamic height 971.279							Station 5011; Apr. 5; latitude 41°45' N., longitude 49°07' W.; depth 3,475 meters; dynamic height 971.358						
0-----	15.47	35.92	0-----	15.47	35.92	26.59	0-----	18.80	36.16	0-----	18.80	36.16	25.97
26-----	15.37	35.92	25-----	15.35	35.92	26.62	26-----	18.50	35.12	25-----	18.50	36.12	26.02
52-----	14.92	35.90	50-----	14.95	35.90	26.69	52-----	16.50	35.85	50-----	16.65	35.86	26.27
78-----	14.45	35.80	75-----	14.50	35.82	26.73	78-----	16.02	36.03	75-----	16.10	36.02	26.53
104-----	13.53	35.65	100-----	13.70	35.67	26.79	104-----	15.82	36.05	100-----	15.85	36.05	26.60
157-----	13.13	35.58	150-----	13.20	35.59	26.82	155-----	14.48	35.82	150-----	14.60	35.85	26.73
209-----	12.01	35.36	200-----	12.25	35.40	26.87	207-----	13.07	35.55	200-----	13.15	35.57	26.82
313-----	9.10	34.86	300-----	9.40	34.90	26.99	311-----	12.81	35.62	300-----	12.90	35.62	26.91
438-----	9.25	35.18	400-----	9.20	35.08	27.16	408-----	10.06	35.27	400-----	10.30	35.30	27.15
664-----	5.85	35.00	600-----	6.60	35.04	27.52	615-----	6.42	35.00	600-----	7.20	35.00	27.41
894-----	4.82	35.02	800-----	5.15	35.01	27.69				(800)	4.85	35.01	27.72
1,117-----	4.19	34.96	1,000-----	4.50	35.00	27.75				(1,000)	4.40	35.00	27.76
1,668-----	3.70	34.95											

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5012; Apr. 6; latitude 41°07.5' N., longitude 48°15' W.; depth 3,621 meters; dynamic height 971.776						
0	18.48	36.34	0	18.48	36.34	26.20
25	18.42	36.36	25	18.42	36.36	26.24
49	17.64	36.43	50	17.65	36.43	26.47
74	17.62	36.44	75	17.65	36.44	26.48
98	17.61	36.44	100	17.65	36.44	26.48
146	17.60	36.44	150	17.69	36.44	26.49
196	17.57	36.45	200	17.55	36.45	26.51
294	17.35		300	17.35	36.41	26.53
373	*16.89	36.38	400	16.55	36.32	26.65
571	13.72	35.78	600	13.30	35.70	26.89
819	10.27	35.16	800	10.60	35.20	27.02
976	6.07	35.03	1,000	5.70	35.03	27.63
1,458	4.17	34.985				
Station 5013; Apr. 6; latitude 41°37' N., longitude 47°14' W.; depth 4,207 meters; dynamic height 971.180						
0	6.88	33.83	0	6.88	33.83	26.54
27	12.80	35.40	25	12.40	35.38	26.82
53	10.07	34.85	50	10.45	34.91	26.82
80	8.17	34.46	75	8.35	34.51	26.86
106	10.90	35.09	100	10.49	35.00	26.90
159	9.75	34.90	150	9.95	34.93	26.92
212	8.81	34.72	200	8.90	34.75	26.96
318	9.65	35.16	300	9.55	35.10	27.12
412	6.43	34.78	400	6.80	34.82	27.33
615	4.46	34.85	600	4.50	34.84	27.62
818	4.36	34.935	800	4.40	34.93	27.70
1,025	3.54	34.90	1,000	3.60	34.90	27.77
1,547	3.57	34.90				
Station 5014; Apr. 6; latitude 41°59' N., longitude 47°54' W.; depth 3,749 meters; dynamic height 970.955						
0	5.60	33.30	0	5.60	33.30	26.27
26	2.18	33.53	25	2.15	33.52	26.81
52	5.30	34.28	50	5.15	34.23	27.06
78	5.73	34.47	75	5.70	34.47	27.20
104	3.10	34.24	100	3.20	34.27	27.31
154	4.86	34.62	150	4.80	34.59	27.39
206	4.77	34.75	200	4.80	34.73	27.50
310		34.90	300	4.60	34.89	27.65
423	4.43	34.90	400	4.45	34.90	27.68
634	4.25	34.95	600	4.25	34.94	27.73
848	3.75	34.90	800	3.85	34.91	27.75
1,059	3.58	34.87	1,000	3.60	34.87	27.75
1,584	3.41	34.90				
Station 5015; Apr. 7; latitude 42°21.5' N., longitude 48°28' W.; depth 3,182 meters; dynamic height 971.000						
0	5.62	33.21	0	5.62	33.21	26.22
26	4.50	33.53	25	4.55	33.52	26.58
51	2.38	33.40	50	2.45	33.40	26.68
77	0.10	33.42	75	0.15	33.42	26.85
102	2.30	33.91	100	2.10	33.85	27.06
152	3.46	34.38	150	3.40	34.35	27.35
203	5.06	34.74	200	5.05	34.72	27.47
305	4.98	34.90	300	5.00	34.89	27.61
405	4.78	34.935	400	4.80	34.93	27.66
607	4.02	34.90	600	4.00	34.90	27.73
810	3.76	34.87	800	3.75	34.87	27.73
1,016	3.61	34.89	1,000	3.65	34.89	27.75
1,535	3.45	34.90				
Station 5016; Apr. 7; latitude 42°54' N., longitude 49°20' W.; depth 1,829 meters; dynamic height 970.943						
0	4.38	33.40	0	4.38	33.40	26.50
24	3.07	33.55	25	3.00	33.50	26.71
49	0.81	33.68	50	0.80	33.69	27.02
73	0.29	33.84	75	0.30	33.85	27.18
97	0.55	33.94	100	0.55	33.95	27.25
146	0.44	34.23	150	0.45	34.24	27.48
194	1.82	34.34	200	2.00	34.36	27.48
291	4.19	34.80	300	4.15	34.81	27.64
349	3.82	34.83	400	3.60	34.83	27.71
527	3.42	34.82	600	3.45	34.83	27.72
708	3.51	34.86	800	3.50	34.87	27.76
893	3.51	34.87	1,000	3.50	34.87	27.76
1,368	3.39	34.88				
Station 5017; Apr. 7; latitude 43°21' N., longitude 48°50' W.; depth 1,701 meters; dynamic height 970.950						
0	5.57	33.36	0	5.57	33.36	26.33
25	3.18	33.57	25	3.18	33.57	26.75
50	2.84	33.84	50	2.84	33.84	26.99
75	3.23	34.08	75	3.23	34.08	27.14
99	3.25	34.26	100	3.25	34.26	27.29
149	3.33	34.44	150	3.35	34.44	27.42
199	3.83	34.61	200	3.85	34.61	27.51
298	4.26	34.83	300	4.30	34.83	27.64
401	4.25	34.90	400	4.30	34.90	27.69
599	3.74	34.88	600	3.75	34.88	27.73
795	3.63	34.89	800	3.60	34.89	27.76
995	3.52	34.88	1,000	3.50	34.88	27.76
1,494	3.41	34.88				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5018; Apr. 7; latitude 43°07' N., longitude 48°10' W.; depth 3,109 meters; dynamic height 970.982								Station 5022; Apr. 9; latitude 42°43.5' N., longitude 45°36' W.; depth 4,755 meters; dynamic height 971.271							
0-----	6.92	33.68		0-----	6.92	33.68	26.41	0-----	16.12	36.02		0-----	16.12	36.02	26.52
24-----		34.83		25-----	9.35	34.82	26.94	26-----	16.17	33.04		25-----	16.15	36.04	26.52
49-----	7.88	34.57		50-----	7.85	34.56	26.97	51-----	15.68	36.05		50-----	15.70	36.05	26.64
73-----	7.44	34.52		75-----	7.45	34.52	27.00	77-----	15.30	35.97		75-----	15.35	35.93	26.66
97-----	7.95	34.83		100-----	8.00	34.84	27.17	102-----	14.68	35.84		100-----	14.75	35.85	26.70
146-----	8.42	35.05		150-----	8.40	35.04	27.26	153-----	13.93	35.76		150-----	14.05	35.77	26.79
194-----	4.66	34.55		200-----	4.55	34.55	27.39	204-----	12.04	35.34		200-----	12.25	35.37	23.85
291-----	4.09	34.74		300-----	4.15	34.76	27.60	303-----	9.61	34.95		300-----	9.70	34.97	27.00
350-----	4.82	34.91		400-----	4.70	34.93	27.67	333-----	9.28	35.02		400-----	8.10	34.94	27.23
530-----	4.29	34.94		600-----	4.20	34.93	27.73	533-----	5.87	34.84		600-----	5.35	34.86	27.54
714-----	4.04	34.92		800-----	3.85	34.91	27.75	724-----	4.83	34.90		800-----	4.55	34.92	27.69
900-----	3.75	34.90		1,000-----	3.70	34.90	27.76	927-----	4.24	34.93		1,000-----	4.15	34.93	27.73
1,379-----	3.54	34.91						1,336-----	3.69	34.91					
Station 5019; Apr. 7-8; latitude 42°50.5' N., longitude 47°33' W.; depth 3,658 meters; dynamic height 970.961								Station 5023; Apr. 9; latitude 43°19' N., longitude 45°04' W.; depth 4,755 meters; dynamic height 971.070							
0-----	6.35	33.36		0-----	6.35	33.35	26.23	0-----	9.86	34.35		0-----	9.86	34.35	26.49
26-----	5.12	34.02		25-----	5.10	34.00	26.89	25-----	9.64	34.61		25-----	9.64	34.61	26.74
52-----	5.10	34.19		50-----	5.10	34.18	27.03	50-----	9.33	34.73		50-----	9.33	34.73	26.86
78-----	5.26	34.30		75-----	5.25	34.29	27.10	76-----	9.21	34.74		75-----	9.20	34.74	26.90
103-----	2.36	34.06		100-----	2.45	34.08	27.21	101-----	8.74	34.70		100-----	8.75	34.70	26.94
154-----	2.83	34.36		150-----	2.85	34.34	27.39	151-----	8.52	34.73		150-----	8.55	34.73	26.99
206-----	3.14	34.50		200-----	3.10	34.48	27.48	201-----	7.11	34.75		200-----	7.15	34.75	27.22
309-----	4.99	34.945		300-----	4.95	34.92	27.64	302-----	5.85	34.84		300-----	5.90	34.84	27.46
411-----	4.23	34.89		400-----	4.30	34.89	27.68	333-----	5.55	34.83		400-----	5.15	34.85	27.56
617-----	4.50	34.97		600-----	4.50	34.97	27.73	555-----	4.49	34.91		600-----	4.46	34.92	27.70
822-----	3.65	34.88		800-----	3.70	34.89	27.75	767-----	4.24	34.93		800-----	4.20	34.93	27.73
1,028-----	3.46	34.86		1,000-----	3.45	34.86	27.75	981-----	4.07	34.93		1,000-----	4.05	34.93	27.74
1,541-----	3.43	34.89						1,410-----	3.68	34.88					
Station 5020; Apr. 8; latitude 42°40' N., longitude 47°07' W.; depth 4,024 meters; dynamic height 971.229								Station 5024; Apr. 9; latitude 43°23' N., longitude 45°55' W.; depth 4,572 meters; dynamic height 971.052							
0-----	16.24	36.04		0-----	16.24	36.04	26.50	0-----	9.50	34.26		0-----	9.50	34.26	26.48
24-----	15.92	36.07		25-----	15.90	36.07	26.60	25-----	8.93	34.55		25-----	8.93	34.55	26.79
49-----	15.56	36.02		50-----	15.55	36.01	26.65	51-----	9.64	34.80		50-----	9.60	34.80	26.83
73-----	14.92	35.89		75-----	14.90	35.89	26.69	76-----	9.42	34.80		75-----	9.45	34.80	26.91
97-----	14.57	35.82		100-----	14.55	35.82	26.72	102-----	9.65	34.95		100-----	9.65	34.94	26.93
145-----	13.92	35.73		150-----	13.85	35.71	26.79	153-----	9.19	35.04		150-----	9.25	35.04	27.13
194-----	12.74	35.54		200-----	12.60	35.52	26.89	203-----	7.51	34.89		200-----	7.60	34.90	27.27
291-----	11.20	35.41		300-----	10.40	35.27	27.11	305-----	5.97	34.81		300-----	6.05	34.81	27.42
265-----	11.13	35.36		400-----	5.45	34.60	27.32	352-----	5.12	34.86		400-----	5.30	34.88	27.56
399-----	5.50	34.60		600-----	4.85	34.86	27.60	576-----	4.43	34.91		600-----	4.40	34.91	27.69
534-----	4.48	34.72		800-----	4.85	34.98	27.69	794-----	4.33			800-----	4.30	34.99	27.76
679-----	5.15	34.98		1,000-----	4.50	34.98	27.73	1,013-----	3.67	34.92		1,000-----	3.70	34.92	27.78
1,062-----	4.41	34.98						1,447-----	3.61	34.92					
Station 5021; Apr. 8; latitude 42°15.5' N., longitude 46°12' W.; depth 4,481 meters; dynamic height 971.561								Station 5025; Apr. 9; latitude 43°32' N., longitude 46°50' W.; depth 4,079 meters; dynamic height 971.119							
0-----	17.33	36.35		0-----	17.33	36.35	26.48	0-----	10.89	34.70		0-----	10.89	34.70	26.53
25-----	17.13	36.33		25-----	17.13	36.33	26.53	25-----	10.14	34.73		25-----	10.14	34.73	26.74
50-----	16.72	36.28		50-----	16.72	36.28	26.58	50-----	9.74	34.83		50-----	9.74	34.83	26.88
75-----	16.71	36.28		75-----	16.71	36.28	26.58	75-----	7.77	34.51		75-----	7.77	34.51	26.94
100-----	16.63	36.28		100-----	16.63	36.28	26.60	100-----	7.31	34.43		100-----	7.31	34.43	26.94
149-----	16.64	36.29		150-----	16.65	36.29	26.61	150-----	9.17	34.84		150-----	9.17	34.84	26.98
199-----	16.66	36.30		200-----	16.65	36.30	26.61	199-----	7.80	34.64		200-----	7.75	34.64	27.05
299-----	16.56	36.26		300-----	16.50	36.26	26.61	299-----		34.55		300-----	6.00	34.55	27.22
318-----	15.81	36.12		400-----	14.55	35.90	26.78	357-----	6.73	34.915		400-----	6.25	34.91	27.46
508-----	12.81	35.66		600-----	11.00	35.45	27.14	578-----	4.24	34.89		600-----	4.25	34.89	27.69
687-----	9.23	35.28		800-----	7.70	35.22	27.51	794-----	4.34	34.95		800-----	4.30	34.95	27.73
886-----	6.90	35.19		1,000-----	5.90	35.11	27.67	1,013-----	3.91	34.92		1,000-----	3.95	34.92	27.75
1,236-----	4.34	34.96						1,449-----	3.53	34.89					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5026; Apr. 9; latitude 43°46.5' N., longitude 47°38' W.; depth 3,932 meters; dynamic height 970.984								Station 5030; Apr. 10; latitude 44°14' N., longitude 48°59' W.; depth 137 meters; dynamic height 971.056							
0	6.79	33.19		0	6.79	33.19	26.05	0	0.91	32.81		0	0.91	32.81	26.32
25	3.98	33.47		25	3.98	33.47	26.60	26	-0.04	32.88		25	0.00	32.88	26.42
50	2.33	33.56		50	2.33	33.56	26.82	51	-1.35	32.99		50	-1.35	32.98	26.55
75	1.43	33.70		75	1.43	33.70	26.99	77	-0.97	33.11		75	-1.00	33.10	26.63
100	1.77	33.88		100	1.77	33.88	27.10	102	-0.65	33.20		100	-0.65	33.19	26.70
150	2.36	34.26		150	2.36	34.26	27.37	128	-0.29	33.35					
199	3.30	34.56		200	3.30	34.56	27.53								
299	3.65	34.74		300	3.70	34.74	27.63								
349	4.47	34.90		400	4.35	34.89	27.68								
571	3.96	34.86		600	3.90	34.86	27.71								
788	3.84	34.89		800	3.80	34.89	27.74								
1,006	3.61	34.88		1,000	3.60	34.88	27.75								
1,442	3.41	34.88													
Station 5027; Apr. 10; latitude 44°01' N., longitude 48°13' W.; depth 3,383 meters; dynamic height 970.955								Station 5031; Apr. 10; latitude 44°17' N., longitude 49°08' W.; depth 75 meters; dynamic height 971.050							
0	6.65	33.24		0	6.65	33.24	26.11	0	0.32	32.87		0	0.32	32.87	26.40
25	4.05	33.60		25	4.05	33.60	26.69	26	-0.51	33.04		25	-0.50	33.03	26.51
50	2.06	33.65		50	2.06	33.65	26.92	52	2.62	33.32		50	2.60	33.32	26.60
75	3.07	34.01		75	3.07	34.01	27.11	67	2.21	33.35		(75)	1.95	33.36	26.68
100	4.43	34.40		100	4.43	34.40	27.28								
150	3.83	34.50		150	3.83	34.50	27.42								
199	5.12	34.81		200	5.10	34.81	27.54								
299	4.35	34.82		300	4.35	34.82	27.63								
343	4.33	34.87		400	4.30	34.89	27.68								
563	4.08	34.92		600	4.00	34.92	27.75								
781	3.49	34.90		800	3.70	34.90	27.76								
998	3.57	34.89		1,000	3.55	34.89	27.76								
1,434	3.40	35.89													
Station 5028; Apr. 10; latitude 44°09' N., longitude 48°47' W.; depth 1,792 meters; dynamic height 971.024								Station 5032; Apr. 10; latitude 44°24' N., longitude 49°23' W.; depth 48 meters; dynamic height 971.050							
0	0.62	32.81		0	0.62	32.81	26.34	0	1.96	32.92		0	1.96	32.92	26.33
23	-0.03	32.92		25	-0.10	32.89	26.42	26	-0.14	32.92		25	-0.10	32.92	26.45
45	-1.16	32.96		50	-1.15	32.99	26.55	52	-0.88	33.00		50	-0.85	32.99	26.54
68	-0.78	33.15		75	-0.50	33.23	26.72								
90	0.51	33.44		100	0.65	33.52	26.90								
135	1.11	33.81		150	1.90	34.00	27.20								
180	3.78	34.38		200	3.95	34.53	27.43								
270	3.27	34.58		300	3.30	34.61	27.57								
214	*4.03	34.57		400	3.35	34.73	27.65								
352	3.31	34.67		600	3.55	34.84	27.72								
490	3.48	34.82		800	3.60	34.86	27.74								
643	3.59	34.84		1,000	3.60	34.88	27.75								
972	3.57	34.88													
Station 5029; Apr. 10; latitude 44°12' N., longitude 48°55' W.; depth 622 meters; dynamic height 971.037								Station 5033; Apr. 10; latitude 45°06' N., longitude 49°25' W.; depth 59 meters; dynamic height 971.086							
0	0.93	32.78		0	0.93	32.78	26.29	0	1.78	32.70		0	1.78	32.70	26.16
25	-0.52	32.88		25	-0.52	32.88	26.44	27	0.58	33.27		25	0.60	33.24	26.68
49	-1.04	32.97		50	-1.05	32.98	26.54	54	1.93	33.43		50	1.80	33.41	26.74
74	-1.06	33.10		75	-1.05	33.11	26.64	65	1.88	33.46		(75)	1.80	33.48	26.79
97	0.33	33.46		100	0.35	33.49	26.89								
146	0.68	33.77		150	0.70	33.79	27.11								
194	1.25	34.15		200	1.30	34.18	27.38								
291	2.20	34.45		300	2.25	34.47	27.55								
388	2.66	34.60		400	2.70	34.62	27.63								
558	3.45	34.80		(600)	3.55	34.84	27.72								
Station 5034; Apr. 10; latitude 45°04' N., longitude 49°11' W.; depth 81 meters; dynamic height 971.077								Station 5035; Apr. 10; latitude 45°01' N., longitude 48°56' W.; depth 714 meters; dynamic height 971.091							
0	2.11	32.60		0	2.11	32.60	26.07	0	2.11	32.60		0	2.11	32.60	26.07
24	-0.47	32.72		25	-0.55	32.72	26.31	24	-0.47	32.72		25	-0.55	32.72	26.31
48	-1.36	32.94		50	-1.35	32.95	26.52	48	-1.36	32.94		50	-1.35	32.95	26.52
72	-1.20	33.01		75	-1.20	33.02	26.58	72	-1.20	33.01		75	-1.20	33.02	26.58
97	-0.93	33.10		100	-0.90	33.12	26.65	97	-0.93	33.10		100	-0.90	33.12	26.65
145	0.01	33.40		150	0.15	33.42	26.85	145	0.01	33.40		150	0.15	33.42	26.85
193	0.75	33.58		200	0.85	33.65	26.99	193	0.75	33.58		200	0.85	33.65	26.99
290	3.11	34.51		300	3.15	34.53	27.51	290	3.11	34.51		300	3.15	34.53	27.51
325	3.47	34.50		400	3.39	34.63	27.63	325	3.47	34.50		400	3.39	34.63	27.63
516	3.40	34.81		(600)	3.45	34.84	27.73	516	3.40	34.81		(600)	3.45	34.84	27.73

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5036; Apr. 10; latitude 44°58' N., longitude 48°36' W.; depth 1,499 meters; dynamic height 970.993								Station 5040; Apr. 11; latitude 44°42' N., longitude 46°26' W.; depth 3,603 meters; dynamic height 971.048							
0	1.02	32.84		0	1.02	32.84	26.34	0	9.71	34.52		0	9.71	34.52	26.65
25	-0.43	33.04		25	-0.43	33.04	26.57	23	9.57	34.56		25	9.55	34.58	26.72
50	0.99	33.26		50	0.99	33.26	26.67	34	10.22	34.97		50	10.20	34.96	26.91
75	-0.46	33.34		75	-0.46	33.34	26.81	68	9.90	34.93		75	9.45	34.85	26.94
100	0.00	33.51		100	0.00	33.51	26.93	90	8.15	34.60		100	8.30	34.63	26.95
150	0.98	33.84		150	0.98	33.84	27.13	135	9.15	34.85		150	9.20	34.91	27.04
200	1.63	34.26		200	1.63	34.26	27.43	180	9.16	35.00		200	8.05	34.90	27.21
300	3.21	34.71		300	3.21	34.71	27.66	270	5.52	34.68		300	5.40	34.73	27.43
358	3.33	34.79		400	3.40	34.81	27.72	244	5.60	34.67		400	4.95	34.89	27.61
582	3.48	34.83		600	3.50	34.83	27.72	407	4.90	34.90		600	4.25	34.92	27.72
798	3.50	34.88		800	3.50	34.88	27.76	574	4.32	34.92		800	3.90	34.91	27.75
1,018	3.54	34.88		1,000	3.50	34.89	27.76	748	3.96	34.91		1,000	3.70	34.90	27.76
1,455	3.40	34.89						1,118	3.59	34.89					
Station 5037; Apr. 11; latitude 44°55' N., longitude 48°18' W.; depth 2,065 meters; dynamic height 970.923								Station 5041; Apr. 11; latitude 44°37' N., longitude 45°34' W.; depth 4,024 meters; dynamic height 971.020							
0	5.19	33.67		0	5.19	33.67	26.63	0	8.71	34.10		0	8.71	34.10	26.48
23	4.50	33.70		25	4.35	33.70	26.74	24	7.95	34.04		25	7.70	34.03	26.57
46	2.39	33.78		50	2.30	33.80	27.01	46	4.15	33.71		50	4.10	33.71	26.78
68	1.75	33.93		75	1.55	33.91	27.15	70	3.98	33.86		75	4.00	33.97	26.99
91	1.14	34.06		100	1.20	34.11	27.34	93	6.87	34.46		100	6.80	34.46	27.04
137	1.69	34.36		150	1.80	34.40	27.53	140	5.81	34.48		150	5.95	34.54	27.21
182	2.18	34.47		200	2.35	34.50	27.56	186	6.54	34.80		200	6.50	34.80	27.35
273	2.98	34.67		300	4.05	34.88	27.70	279	4.55	34.75		300	4.60	34.77	27.56
306	4.18	34.90		400	4.15	34.91	27.72	222	6.21	34.80		400	4.85	34.90	27.63
510	3.95	34.91		600	3.75	34.90	27.75	376	4.85	34.88		600	4.50	34.94	27.70
718	3.67	34.88		800	3.65	34.89	27.75	537	4.65	34.95		800	3.90	34.91	27.75
925	3.68	34.90		1,000	3.65	34.90	27.76	711	4.15	34.92		1,000	3.55	34.90	27.77
1,346	3.51	34.90						1,092	3.47	34.89					
Station 5038; Apr. 11; latitude 44°51' N., longitude 47°49' W.; depth 3,567 meters; dynamic height 970.970								Station 5042; Apr. 12; latitude 44°28' N., longitude 45°15' W.; depth 4,024 meters; dynamic height 971.124							
0	6.62	33.29		0	6.62	33.29	26.14	0	11.76	34.90		0	11.76	34.90	26.58
24	4.79	33.47		25	4.75	33.47	26.52	25	11.62	34.92		25	11.62	34.92	26.63
49	4.61	33.74		50	4.60	33.75	26.75	50	10.33	34.96		50	10.33	34.96	26.88
73	5.05	34.06		75	5.05	34.06	26.95	75	9.02	34.74		75	9.02	34.74	26.93
98	3.06	34.06		100	2.90	34.06	27.17	99	8.90	34.76		100	8.90	34.76	26.97
147	1.39	34.18		150	1.40	34.20	27.40	150	8.81	34.80		150	8.85	34.80	27.01
195	4.10	34.64		200	4.10	34.66	27.53	200	9.54	35.05		200	9.55	35.05	27.08
293	4.27	34.83		300	4.25	34.83	27.65	299	8.15	35.04		300	8.15	35.04	27.30
476	3.50	34.82		400	3.75	34.82	27.69	221	8.72	34.98		400	6.75	34.98	27.45
667	3.71	34.90		600	3.65	34.88	27.74	365	7.27	35.01		600	4.90	34.94	27.66
865	3.48	34.87		800	3.55	34.88	27.75	511	5.26	34.93		800	4.40	34.94	27.71
1,278	3.43	34.89		1,000	3.45	34.88	27.76	679	4.69	34.95		1,000	3.90	34.92	27.76
								1,046	3.80	34.92					
Station 5039; Apr. 11; latitude 44°46' N., longitude 47°11' W.; depth 3,475 meters; dynamic height 971.095								Station 5043; Apr. 12; latitude 44°54' N., longitude 45°11' W.; depth 3,987 meters; dynamic height 971.013							
0	9.89	34.67		0	9.89	34.67	26.73	0	7.20	33.69		0	7.20	33.69	26.38
25	9.83	34.84		25	9.83	34.84	26.87	25	6.40	33.76		25	6.40	33.76	26.55
48	10.25	35.12		50	10.25	35.02	26.94	50	9.47	34.84		50	9.47	34.84	26.94
73	10.33	35.14		75	10.30	35.04	26.95	75	8.95	34.68		75	8.95	34.84	27.02
97	10.27	35.13		100	10.25	35.03	26.95	100	8.89	34.84		100	8.89	34.84	27.03
146	10.35	35.14		150	10.30	35.04	26.95	151	8.40	34.94		150	8.45	34.94	27.18
194	10.45	35.16		200	10.40	35.06	26.95	201	7.02	34.90		200	7.10	34.91	27.36
291	5.81	34.73		300	5.80	34.74	27.39	301	4.49	34.70		300	4.50	34.70	27.51
229	6.76	34.64		400	5.45	34.86	27.53	245	5.36	34.70		400	4.80	34.90	27.64
378	5.55	34.84		600	4.55	34.93	27.69	387	4.78	34.89		600	4.30	34.94	27.72
526	4.77	34.91		800	4.20	34.93	27.73	518	4.58	34.96		800	3.80	34.92	27.77
703	4.35	34.94		1,000	3.90	34.91	27.75	680	4.01	34.92		1,000	3.60	34.91	27.78
1,097	3.72	34.90						1,025	3.61	34.91					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5044; Apr. 12; latitude 45°30' N., longitude 45°08' W.; depth 3,914 meters; dynamic height 970.935								Station 5048; Apr. 13; latitude 45°38.5' N., longitude 47°38' W.; depth 1,257 meters; dynamic height 971.016							
0-----	6.22	33.69		0-----	6.22	33.69	26.51	0-----	0.44	32.72		0-----	0.44	32.72	26.27
26-----	4.57	33.88		25-----	4.55	33.88	26.85	20-----	0.47	32.73		25-----	0.00	32.78	26.34
50-----	3.51	33.96		50-----	3.50	33.96	27.03	40-----	-1.55	33.00		50-----	-1.45	33.08	26.63
76-----	3.73	34.16		75-----	3.70	34.16	27.17	60-----	-1.29	33.15		75-----	-0.70	33.29	26.77
100-----	4.05	34.35		100-----	4.05	34.35	27.29	81-----	-0.42	33.34		100-----	0.25	33.52	26.93
152-----	4.27	34.58		150-----	4.30	34.57	27.44	121-----	0.75	33.72		150-----	0.80	33.85	27.15
202-----	4.19	34.68		200-----	4.20	34.67	27.53	161-----	0.84	33.92		200-----	2.50	34.26	27.36
302-----	4.30	34.86		300-----	4.30	34.86	27.66	242-----	3.83	34.64		300-----	4.20	34.80	27.63
278-----	4.24	34.84		400-----	4.20	34.91	27.72	379-----	4.29	34.88		400-----	4.20	34.88	27.69
461-----	4.11	34.92		600-----	3.90	34.91	27.75	543-----	3.59	34.84		600-----	3.55	34.85	27.73
645-----	3.83	34.90		800-----	3.55	34.88	27.75	712-----	3.53	34.86		800-----	3.55	34.86	27.74
842-----	3.50	34.87		1,000---	3.45	34.88	27.76	929-----	3.51	34.87		(1,000)-	3.50	34.88	27.76
1,259---	3.43	34.90													
Station 5045; Apr. 12; latitude 45°30' N.; longitude 45°52' W.; depth 3,475 meters; dynamic height 970.917								Station 5049; Apr. 13; latitude 45°45' N., longitude 47°49' W.; depth 691 meters; dynamic height 971.035							
0-----	6.36	33.71		0-----	6.36	33.71	26.51	0-----	0.44	32.62		0-----	0.44	32.62	26.19
23-----	6.16	33.75		25-----	6.10	33.75	26.58	20-----	0.43	32.62		25-----	0.20	32.62	26.20
47-----	5.22	33.99		50-----	4.85	34.02	26.94	41-----	-1.20	32.94		50-----	-1.25	33.02	26.58
70-----	3.02	34.20		75-----	2.90	34.22	27.30	61-----	-1.24	33.11		75-----	-1.00	33.22	26.73
93-----	2.69	34.26		100-----	2.75	34.29	27.36	81-----	-0.87	33.26		100-----	-0.37	33.40	26.85
140-----	4.06	34.58		150-----	4.10	34.61	27.49	122-----	0.15	33.59		150-----	0.80	33.84	27.14
187-----	4.15	34.72		200-----	4.15	34.75	27.59	163-----	1.02	33.94		200-----	1.20	34.09	27.32
280-----	4.12	34.87		300-----	4.20	34.89	27.70	244-----	1.43	34.23		300-----	2.10	34.44	27.53
290-----	4.21	34.90		400-----	4.10	34.92	27.74	412-----	3.46	34.80		400-----	3.40	34.78	27.69
483-----	3.98	34.92		600-----	3.85	34.92	27.76	650-----	3.46	34.84		600-----	3.45	34.83	27.72
678-----	3.74	34.91		800-----	3.60	34.90	27.77								
879-----	3.55	34.89		1,000---	3.55	34.90	27.77								
1,303---	3.55	34.91													
Station 5046; Apr. 12; latitude 45°30' N.; longitude 46°39' W.; depth 2,195 meters; dynamic height 970.989								Station 5050; Apr. 13; latitude 45°51' N., longitude 48°00' W.; depth 174 meters; dynamic height 971.063							
0-----	5.50	33.71		0-----	5.50	33.71	26.62	0-----	0.46	32.58		0-----	0.46	32.58	26.16
26-----	5.15	33.76		25-----	5.20	33.76	26.70	29-----	-0.21	32.74		25-----	-0.10	32.72	26.29
51-----	4.02	33.78		50-----	4.05	33.78	26.82	60-----	-1.37	32.94		50-----	-1.10	32.87	26.45
77-----	3.79	33.78		75-----	3.80	33.78	26.86	90-----	-0.18	33.28		75-----	-0.90	33.11	26.64
102-----	3.89	33.94		100-----	3.80	33.92	26.97	150-----	0.56	33.61		100-----	0.00	33.35	26.80
154-----	4.57	34.42		150-----	4.50	34.38	27.26					150-----	0.55	33.61	26.98
205-----	4.90	34.68		200-----	4.90	34.66	27.44								
307-----	4.75	34.88		300-----	4.90	34.87	27.61	Station 5051; Apr. 13; latitude 45°57.5' N., longitude 48°11' W.; depth 116 meters; dynamic height 971.075							
305-----	4.93	34.88		400-----	4.60	34.90	27.66	0-----	0.70	32.60		0-----	0.70	32.60	26.17
510-----	4.13	34.91		600-----	3.90	34.91	27.75	25-----	0.66	32.62		25-----	0.66	32.62	26.18
721-----	3.73	34.90		800-----	3.70	34.90	27.76	59-----	-0.70	32.84		50-----	-0.70	32.84	26.42
928-----	3.62	34.89		1,000---	3.55	34.89	27.76	75-----	-1.32	32.91		75-----	-1.32	32.91	26.49
1,348---	3.41	34.89						100-----	-1.30	33.04		100-----	-1.30	33.04	26.59
Station 5047; Apr. 12; latitude 45°30' N.; longitude 47°24' W.; depth 1,582 meters; dynamic height 970.990								Station 5052; Apr. 13; latitude 46°14' N., longitude 48°39' W.; depth 94 meters; dynamic height 971.072							
0-----	6.29	33.56		0-----	6.29	33.56	26.40	0-----	0.91	32.74		0-----	0.91	32.74	26.26
24-----	6.11	33.59		25-----	6.10	33.59	26.45	25-----	0.86	32.74		25-----	0.86	32.74	26.27
47-----	4.71	33.86		50-----	4.60	33.86	26.84	50-----	-0.57	32.88		50-----	-0.57	32.88	26.44
71-----	4.19	33.84		75-----	4.20	33.85	26.87	75-----	-0.72	32.94		75-----	-0.72	32.94	26.50
94-----	4.38	33.95		100-----	4.30	33.98	26.96								
141-----	3.50	34.22		150-----	3.60	34.29	27.28								
189-----	4.13	34.60		200-----	4.20	34.64	27.50								
283-----	4.40	34.82		300-----	4.40	34.84	27.63								
485-----	4.11	34.90		400-----	4.25	34.89	27.69								
684-----	3.55	34.84		600-----	3.80	34.87	27.73								
886-----	3.52	34.86		800-----	3.50	34.85	27.74								
1,303---	3.44	34.88		1,000---	3.50	34.87	27.76								

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5053; Apr. 13; latitude 46°13' N., longitude 48°14' W.; depth 114 meters; dynamic height 971.072								Station 5058; Apr. 14; latitude 46°02' N., longitude 45°47' W.; depth 2,579 meters; dynamic height 970.943							
0-----	0.75	32.66		0-----	0.75	32.66	26.20	0-----	6.47	33.76		0-----	6.47	33.76	26.53
25-----	0.43	32.65		25-----	0.43	32.65	26.22	27-----	6.49	33.76		25-----	6.50	33.76	26.53
51-----	-1.19	32.88		50-----	-1.15	32.86	26.44	53-----	5.48	34.07		50-----	5.60	34.01	26.84
76-----	-1.23	33.05		75-----	-1.25	33.04	26.59	79-----	4.95	34.40		75-----	5.00	34.35	27.18
102-----	-0.38	33.24		100-----	-0.50	33.22	26.71	105-----	4.14	34.42		100-----	4.25	34.42	27.32
Station 5054; Apr. 13; latitude 46°12' N., longitude 47°54' W.; depth 179 meters; dynamic height 971.091								159-----	4.07	34.62		150-----	4.05	34.59	27.47
0-----	0.26	32.64		0-----	0.26	32.64	26.22	211-----	4.48	34.76		200-----	4.40	34.73	27.54
25-----	0.22	32.65		25-----	0.22	32.65	26.22	316-----	4.69	34.93		300-----	4.70	34.92	27.67
50-----	-0.86	32.69		50-----	-0.86	32.69	26.29	349-----	4.09	34.87		400-----	3.85	34.86	27.71
75-----	-1.35	32.92		75-----	-1.35	32.92	26.50	565-----	3.55	34.86		600-----	3.55	34.86	27.74
100-----	-0.83	33.13		100-----	-0.83	33.13	26.65	772-----	3.58	34.88		800-----	3.55	34.83	27.75
150-----	-0.06	33.45		150-----	-0.06	33.45	26.88	988-----	3.51	34.89		1,000-----	3.50	34.89	27.77
Station 5055; Apr. 13; latitude 46°10' N., longitude 47°31' W.; depth 686 meters; dynamic height 970.998								1,426-----	3.39	34.88		Station 5059; Apr. 14; latitude 45°53' N., longitude 45°01' W.; depth 3,621 meters; dynamic height 970.947			
0-----	0.42	32.62		0-----	0.42	32.62	26.19	0-----	6.38	33.65		0-----	6.38	33.67	26.48
25-----	0.41	32.62		25-----	0.41	32.62	26.19	27-----	5.04	33.76		25-----	5.05	33.79	26.73
50-----	-0.84	33.12		50-----	-0.84	33.12	26.64	53-----	5.94	34.12		50-----	5.90	34.08	26.86
74-----	-0.12	33.46		75-----	-0.15	33.47	26.91	81-----	5.59	34.43		75-----	5.65	34.39	27.13
99-----	0.81	33.86		100-----	0.80	33.87	27.17	107-----	5.62	34.53		100-----	5.60	34.50	27.23
149-----	1.28	34.02		150-----	1.39	34.02	27.26	161-----	4.84	34.68		150-----	4.90	34.65	27.43
198-----	1.06	34.12		200-----	1.05	34.13	27.36	215-----	5.07	34.85		200-----	5.00	34.82	27.56
297-----	2.22	34.47		300-----	2.25	34.48	27.55	322-----	4.63	34.92		300-----	4.75	34.92	27.66
374-----	2.92	34.66		400-----	3.15	34.72	27.67	334-----	4.64	34.94		400-----	4.49	34.93	27.91
564-----	3.49	34.86		(600)-----	3.50	34.87	27.76	551-----	3.95	34.92		600-----	3.85	34.91	27.75
Station 5056; Apr. 13; latitude 46°09' N., longitude 47°14' W.; depth 1,518 meters; dynamic height 970.923								707-----	3.57	34.88		800-----	3.55	34.88	27.75
0-----	0.96	32.76		0-----	0.96	32.76	26.27	(1,000)-----				3.55	34.89	27.76	
26-----	3.33	33.59		25-----	3.30	33.57	26.74	Station 5060; Apr. 14; latitude 45°55' N., longitude 44°25' W.; depth 3,841 meters; dynamic height 971.005							
50-----	1.31	33.94		50-----	1.30	33.95	27.20	0-----	6.27	33.54		0-----	6.27	33.54	26.39
76-----	2.51	34.20		75-----	2.50	34.20	27.31	24-----	6.15	33.52		25-----	6.15	33.52	26.39
101-----	1.31	34.18		100-----	1.30	34.18	27.38	49-----	4.64	33.76		50-----	4.65	33.76	26.75
152-----	1.85	34.32		150-----	1.89	34.32	27.47	73-----	6.88	34.30		75-----	6.85	34.30	26.91
202-----	1.62	34.37		200-----	1.60	34.37	27.52	97-----	4.74	34.10		100-----	4.65	34.10	27.02
303-----	3.14	34.72		300-----	3.10	34.71	27.67	146-----	3.99	34.30		150-----	3.95	34.31	27.27
282-----	2.94	34.67		400-----	3.50	34.81	27.71	194-----	3.69	34.47		200-----	3.70	34.49	27.43
467-----	3.54	34.84		600-----	3.55	34.87	27.75	291-----	4.42	34.76		300-----	4.45	34.77	27.58
653-----	3.51	34.87		800-----	3.50	34.86	27.75	321-----	4.44	34.80		400-----	4.49	34.87	27.66
847-----	3.49	34.86		1,000-----	3.45	34.87	27.76	528-----	4.26	34.93		600-----	4.15	34.93	27.73
1,253-----	3.47	34.88						734-----	3.95	34.92		800-----	3.90	34.92	27.76
Station 5057; Apr. 13; latitude 46°05' N., longitude 46°28' W.; depth 622 meters; dynamic height 970.985								943-----	3.81	34.91		1,000-----	3.75	34.91	27.76
0-----	5.46	33.71		0-----	5.46	33.71	26.63	1,367-----	3.41	34.87		Station 5061; Apr. 28; latitude 49°40' N., longitude 47°40' W.; depth 2,561 meters; dynamic height 970.881			
26-----	5.46	33.71		25-----	5.45	33.71	26.63	0-----	6.04	34.35		0-----	6.04	34.35	27.05
51-----	4.17	33.78		50-----	4.15	33.78	26.82	25-----	5.87	34.34		25-----	5.87	34.34	27.07
76-----	5.29	34.00		75-----	5.30	34.00	26.87	49-----	4.65	34.45		50-----	4.65	34.45	27.30
101-----	3.97	33.91		100-----	3.95	33.91	26.94	74-----	4.26	34.52		75-----	4.25	34.52	27.40
152-----	5.41	34.59		150-----	5.49	34.56	27.35	98-----	3.99	34.55		100-----	4.00	34.55	27.45
203-----	4.95	34.70		200-----	4.95	34.69	27.45	148-----	4.41	34.79		150-----	4.40	34.79	27.59
304-----	4.63	34.83		300-----	4.60	34.82	27.60	197-----	3.93	34.80		200-----	3.90	34.80	27.66
326-----	4.51	34.85		400-----	4.55	34.89	27.68	295-----	3.26	34.80		300-----	3.25	34.80	27.72
507-----	4.08	34.90		(600)-----	3.90	34.90	27.74	383-----	3.21	34.80		400-----	3.25	34.80	27.72
								575-----	3.40	34.85		600-----	3.45	34.85	27.74
								760-----	3.49	34.87		800-----	3.55	34.87	27.75
								962-----	3.46	34.88		1,000-----	3.45	34.88	27.76
								1,457-----	3.37	34.90					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5062; Apr. 28; latitude 49°18' N., longitude 48°09' W.; depth 2,323 meters; dynamic height 970.849								Station 5066; Apr. 30; latitude 48°02.5' N., longitude 48°45' W.; depth 315 meters; dynamic height 970.964							
0	4.44	34.41		0	4.44	34.41	27.29	0	1.05	32.82		0	1.05	32.82	26.32
24	4.31	34.41		25	4.30	34.41	27.31	25	0.66	33.04		25	0.66	33.04	26.51
47	4.20	34.50		50	4.15	34.51	27.40	50	0.13	33.68		50	0.13	33.68	27.05
71	3.46	34.56		75	3.45	34.58	27.52	74	0.29	33.87		75	0.30	33.88	27.20
95	3.65	34.71		100	3.65	34.72	27.62	99	0.49	34.00		100	0.50	34.00	27.29
142	3.48	34.78		150	3.45	34.78	27.68	148	1.01	34.18		150	1.05	34.19	27.41
189	3.31	34.78		200	3.30	34.78	27.70	197	1.46	34.30		200	1.50	34.30	27.47
284	3.38	34.80		300	3.30	34.79	27.71	286	2.29	34.51		(300)	2.45	34.55	27.59
326	3.04	34.78		400	3.15	34.80	27.73								
487	3.26	34.83		600	3.35	34.85	27.75								
647	3.37	34.86		800	3.50	34.87	27.76								
				1,000	3.50	34.88	27.76								
Station 5063; Apr. 28; latitude 48°53' N., longitude 48°11' W.; depth 2,265 meters; dynamic height 970.858								Station 5067; Apr. 30; latitude 47°53' N., longitude 48°53' W.; depth 215 meters; dynamic height 971.028							
0	3.94	34.20		0	3.94	34.20	27.18	0	0.33	32.43		0	0.33	32.43	26.04
23	4.21	34.33		25	4.20	34.34	27.26	24	0.33	32.43		25	0.30	32.43	26.04
47	4.23	34.46		50	4.20	34.47	27.37	48	-1.54	33.10		50	-1.55	33.12	26.67
70	3.34	34.54		75	3.15	34.56	27.54	72	-1.50	33.26		75	-1.45	33.27	26.78
94	2.60	34.61		100	2.60	34.62	27.64	97	-0.60	33.42		100	-0.55	33.45	26.90
141	2.71	34.64		150	2.75	34.66	27.66	145	0.43	33.85		150	0.50	33.88	27.19
187	2.92	34.74		200	2.95	34.74	27.70	193	1.10	34.09		200	1.20	34.12	27.35
281	3.03	34.77		300	3.10	34.78	27.72								
315	3.13	34.78		400	3.25	34.80	27.72								
482	3.34	34.82		600	3.40	34.83	27.73								
658	*3.32	34.84		800	3.45	34.86	27.75								
841	3.45	34.86		1,000	3.40	34.86	27.76								
1,327	3.34	34.86													
Station 5064; Apr. 29-30; latitude 48°28' N., longitude 48°28' W.; depth 1,866 meters; dynamic height 970.850								Station 5068; Apr. 30; latitude 47°53.5' N., longitude 48°58' W.; depth 180 meters; dynamic height 971.064							
0	2.38	33.63		0	2.38	33.63	26.86	0	1.33	32.54		0	1.33	32.54	26.08
19	2.49	33.87		25	2.30	34.03	27.19	25	1.28	32.55		25	1.28	32.55	26.08
38	1.94	34.46		50	2.05	34.49	27.58	49	-0.57	32.66		50	-0.60	32.67	26.27
58	2.11	34.51		75	2.25	34.55	27.61	74	-1.44	32.98		75	-1.45	32.99	26.56
77	2.24	34.56		100	2.40	34.60	27.64	99	-1.21	33.12		100	-1.20	33.12	26.66
115	2.52	34.63		150	2.70	34.67	27.67	148	0.37	33.54		150	0.50	33.57	26.95
153	2.74	34.68		200	3.00	34.71	27.68								
230	3.16	34.73		300	3.40	34.82	27.73								
294	3.36	34.81		400	3.50	34.85	27.74								
450	3.51	34.86		600	3.55	34.86	27.74								
610	3.48	34.86		800	3.50	34.87	27.76								
764	3.50	34.87		1,000	3.40	34.88	27.77								
1,148	3.33	34.88													
Station 5065; Apr. 30; latitude 48°07.5' N., longitude 48°42' W.; depth 732 meters; dynamic height 970.950								Station 5069; Apr. 30; latitude 47°46' N., longitude 48°35' W.; depth 220 meters; dynamic height 971.029							
0	1.15	32.97		0	1.15	32.97	26.43	3	0.45	32.42		0	0.45	32.42	26.03
24	0.13	33.22		25	0.15	33.23	26.69	25	0.42	32.43		25	0.42	32.43	26.04
47	0.41	33.78		50	0.40	33.79	27.13	47	-1.44	33.10		50	-1.55	33.12	26.67
71	0.54	33.88		75	0.55	33.90	27.21	68	-1.61	33.22		75	-1.60	33.24	26.76
94	0.63	34.01		100	0.65	34.03	27.30	90	-1.31	33.29		100	-0.85	33.38	26.85
140	1.03	34.15		150	1.10	34.17	27.40	133	0.72	33.50		150	0.90	33.90	27.19
187	1.29	34.26		200	1.40	34.29	27.47	177	*1.07	34.02		(200)	1.20	34.09	27.32
281	2.13	34.51		300	2.30	34.54	27.60								
298		34.53		400	2.80	34.68	27.66								
454	3.07	34.74		(600)	3.50	34.84	27.73								
Station 5070; Apr. 30; latitude 47°49' N., longitude 48°06' W.; depth 283 meters; dynamic height 971.034								Station 5071; Apr. 30; latitude 47°49' N., longitude 48°06' W.; depth 283 meters; dynamic height 971.034							
0	0.53	32.40		0	0.53	32.40	26.01	0	0.53	32.40		0	0.53	32.40	26.01
23	0.51	32.40		25	0.50	32.40	26.02	23	0.51	32.40		25	0.50	32.40	26.02
45	-1.28	32.86		50	-1.35	32.95	26.52	45	-1.28	32.86		50	-1.35	32.95	26.52
68	-1.39	33.15		75	-1.30	33.20	26.72	68	-1.39	33.15		75	-1.30	33.20	26.72
91	-0.81	33.32		100	-0.55	33.39	26.85	91	-0.81	33.32		100	-0.55	33.39	26.85
136	0.36	33.72		150	0.40	33.80	27.14	136	0.36	33.72		150	0.40	33.80	27.14
182	0.54	33.98		200	0.90	34.05	27.33	182	0.54	33.98		200	0.90	34.05	27.33
250	1.89	34.37						250	1.89	34.37					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5071; Apr. 30; latitude 47°53' N., longitude 47°32' W.; depth 352 meters; dynamic height 970.950.								Station 5075; May 1; latitude 48°57' N., longitude 46°16' W.; depth 2,616 meters; dynamic height 970.841.							
0	1.21	32.52		0	1.21	32.52	26.07	0	4.45	34.40		0	4.45	34.40	27.28
26	0.44	32.91		25	0.45	32.90	26.41	24	4.46	34.40		25	4.45	34.40	27.28
51	0.26	33.70		50	0.25	33.67	27.05	47	4.46	34.41		50	4.45	34.42	27.30
77	0.49	33.85		75	0.45	33.84	27.16	71	3.13	34.64		75	3.05	34.65	27.62
102	0.89	34.08		100	0.85	34.06	27.32	95	2.98	34.70		100	3.00	34.70	27.60
155	1.42	34.28		150	1.35	34.26	27.45	143	3.02	34.74		150	3.00	34.74	27.67
206	2.07	34.46		200	2.00	34.43	27.53	190	2.87	34.74		200	2.85	34.74	27.71
308	2.59	34.62		300	2.55	34.61	27.64	285	3.02	34.78		300	3.10	34.79	27.73
Station 5072; Apr. 30; latitude 48°00' N., longitude 47°24' W.; depth 439 meters; dynamic height 970.923.								357	3.44	34.85		400	3.45	34.85	27.76
0	1.39	32.84		0	1.39	32.84	26.32	536	3.34	34.855		600	3.40	34.86	27.74
26	1.61	33.04		25	1.60	33.04	26.46	717	3.43	34.87		800	3.45	34.88	27.76
50	1.74	33.90		50	1.75	33.90	27.13	899	3.43	34.88		1,000	3.40	34.88	27.77
76	2.78	34.34		75	2.80	34.33	27.39	1,356	3.36	34.88					
101	2.00	34.45		100	2.00	34.29	27.42	Station 5076; May 1; latitude 49°19.5' N., longitude 45°49' W.; depth 3,017 meters; dynamic height 970.883.							
152	2.20	34.46		150	2.20	34.45	27.54	0	5.28	34.20		0	5.28	34.20	27.03
202	2.43	34.58		200	2.40	34.57	27.62	26	5.27	34.22		25	5.30	34.22	27.05
303	2.91	34.68		300	2.90	34.67	27.66	52	5.06	34.24		50	5.10	34.24	27.08
405	3.39	34.80		400	3.40	34.80	27.71	78	3.82	34.50		75	3.95	34.48	27.40
Station 5073; Apr. 30–May 1; latitude 48°18' N., longitude 47°02' W.; depth 1,500 meters; dynamic height 970.870.								103	3.54	34.56		100	3.55	34.55	27.49
0	2.20	33.44		0	2.20	33.44	26.73	156	2.94	34.62		150	2.95	34.61	27.60
24	2.20	33.47		25	2.20	33.47	26.76	207	4.00	34.85		200	3.95	34.84	27.68
48	1.93	34.14		50	1.95	34.20	27.36	310	3.60	34.84		300	3.65	34.84	27.71
72	2.17	34.50		75	2.20	34.51	27.59	397	3.46	34.82		400	3.45	34.82	27.72
96	2.44	34.58		100	2.50	34.59	27.62	599	3.52	34.86		600	3.55	34.86	27.74
145	2.62	34.63		150	2.65	34.64	27.65	805	3.47	34.88		800	3.50	34.88	27.76
193	2.94	34.73		200	3.00	34.74	27.70	1,015	3.41	34.88		1,000	3.40	34.88	27.77
289	3.36	34.82		300	3.45	34.82	27.72	1,551	3.39	34.91					
313	3.50	34.83		400	3.55	34.86	27.74	Station 5077; May 1; latitude 49°10' N., longitude 45°21' W.; depth 2,378 meters; dynamic height 970.872.							
474	3.57	34.87		600	3.60	34.88	27.75	0	5.58	34.32		0	5.58	34.32	27.09
639	3.57	34.88		800	3.55	34.87	27.75	27	5.58	34.32		25	5.60	34.32	27.09
809	3.53	34.87		1,000	3.45	34.88	27.76	52	5.17	34.31		50	5.30	34.31	27.12
1,149	3.37	34.88						79	3.30	34.52		75	3.60	34.50	27.45
Station 5074; May 1; latitude 48°38' N., longitude 46°38' W.; depth 2,225 meters; dynamic height 970.853.								105	3.11	34.59		100	3.10	34.57	27.56
0	3.29	33.84		0	3.29	33.84	26.95	158	3.26	34.71		150	3.25	34.69	27.63
24	3.30	33.85		25	3.30	33.85	26.96	210	3.43	34.79		200	3.40	34.78	27.69
47	3.98	34.46		50	3.15	34.47	27.47	315	3.56	34.82		300	3.55	34.83	27.71
71	3.02	34.58		75	3.00	34.59	27.58	345	3.54	34.84		400	3.55	34.84	27.72
94	2.86	34.62		100	2.85	34.62	27.62	546	3.50	34.86		600	3.50	34.86	27.75
142	2.72	34.65		150	2.75	34.66	27.66	768	3.48	34.87		800	3.50	34.87	27.76
189	2.98	34.75		200	3.00	34.76	27.72	976	3.37	34.87		1,000	3.35	34.87	27.77
283	3.39	34.84		300	3.35	34.83	27.73	1,525	3.33	34.90					
292	3.35	34.81		400	3.50	34.86	27.75	Station 5078; May 1; latitude 48°59' N., longitude 44°49' W.; depth 1,884 meters; dynamic height 970.844.							
451	3.52	34.87		600	3.55	34.88	27.75	0	4.77	34.28		0	4.77	34.28	27.15
621	3.50	34.88		800	3.50	34.88	27.76	26	4.78	34.31		25	4.75	34.30	27.17
800	3.48	34.88		1,000	3.40	34.88	27.77	51	3.57	34.50		50	3.60	34.50	27.45
1,290	3.32	34.88						77	3.15	34.57		75	3.15	34.56	27.54
								103	3.21	34.68		100	3.20	34.67	27.63
								153	3.19	34.74		150	3.20	34.73	27.67
								205	3.47	34.82		200	3.45	34.81	27.71
								308	3.36	34.84		300	3.35	34.84	27.74
								414	3.35	34.85		400	3.35	34.85	27.75
								621	3.48	34.88		600	3.50	34.88	27.76
								1,037	3.34	34.87		800	3.45	34.88	27.76
								1,561	3.28	34.88		1,000	3.35	34.87	27.77

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5079; May 2; latitude 48°40' N., longitude 45°19' W.; depth 1,097 meters; dynamic height 970.872							
0	4.12	33.91	0	4.12	33.91	26.93	
24	4.15	34.04	25	4.15	34.04	27.03	
49	3.30	34.18	50	3.25	34.19	27.23	
73	2.10	34.42	75	2.10	34.42	27.52	
97	2.08	34.43	100	2.10	34.43	27.52	
145	2.53	34.56	150	2.55	34.58	27.61	
194	2.89	34.69	200	2.95	34.70	27.67	
291	3.49	34.82	300	3.50	34.81	27.71	
339	3.59	34.82	400	3.60	34.86	27.74	
514	3.58	34.89	600	3.60	34.88	27.75	
691	3.52	34.87	800	3.45	34.88	27.76	
873	3.45	34.89	(1,000)	3.35	34.88	27.77	
Station 5080; May 2; latitude 48°20.5' N., longitude 45°49' W.; depth 951 meters; dynamic height 970.881							
0	3.88	33.72	0	3.88	33.72	26.80	
25	3.86	33.73	25	3.86	33.73	26.81	
50	2.23	34.14	50	2.23	34.14	27.28	
74	2.13	34.35	75	2.15	34.35	27.46	
99	2.08	34.40	100	2.10	34.40	27.50	
148	2.62	34.56	150	2.65	34.57	27.60	
198	3.51	34.75	200	3.50	34.73	27.66	
297	3.56	34.84	300	3.55	34.83	27.71	
342	3.55	34.84	400	3.55	34.85	27.73	
532	3.50	34.86	600	3.50	34.86	27.75	
736	3.41	34.86	800	3.40	34.86	27.76	
Station 5081; May 2; latitude 47°59.5' N., longitude 46°21' W.; depth, 1,170 meters; dynamic height 970.855							
0	3.37	33.72	0	3.37	33.72	26.85	
25	3.46	33.87	25	3.46	33.87	26.96	
50	2.06	34.39	50	2.06	34.39	27.50	
75	2.28	34.51	75	2.28	34.51	27.58	
100	2.36	34.56	100	2.36	34.56	27.61	
150	2.86	34.66	150	2.86	34.66	27.65	
200	3.54	34.80	200	3.54	34.80	27.69	
300	3.54	34.85	300	3.54	34.85	27.73	
375	3.58	34.88	400	3.55	34.88	27.75	
563	3.48	34.87	600	3.50	34.87	27.76	
753	3.44	34.88	800	3.45	34.88	27.76	
978	3.38	34.87	1,000	3.40	34.87	27.77	
Station 5082; May 2; latitude 47°51.5' N., longitude 46°03' W.; depth 604 meters; dynamic height 970.873							
0	3.35	33.42	0	3.35	33.42	26.62	
25	3.43	33.60	25	3.43	33.60	26.75	
50	2.23	34.16	50	2.23	34.16	27.30	
75	1.92	34.40	75	1.92	34.40	27.52	
100	1.93	34.46	100	1.93	34.46	27.57	
150	2.69	34.62	150	2.69	34.62	27.63	
201	3.03	34.71	200	3.05	34.71	27.67	
301	3.51	34.82	300	3.50	34.82	27.72	
403	3.56	34.875	400	3.55	34.87	27.75	
506	3.50	34.88	(600)	3.50	34.88	27.76	
Station 5083; May 2; latitude 47°47' N., longitude 45°52' W.; depth 353 meters; dynamic height 970.883							
0	2.90	33.47	0	2.90	33.47	26.70	
24	3.09	33.54	25	3.10	33.55	26.74	
49	0.85	34.03	50	0.85	34.04	27.30	
73	1.22	34.16	75	1.25	34.18	27.39	
97	1.99	34.36	100	2.00	34.37	27.49	
145	2.42	34.56	150	2.45	34.57	27.61	
194	2.52	34.62	200	2.55	34.63	27.65	
291	3.65	34.85	300	3.65	34.85	27.72	
357	3.73	34.86					
Station 5084; May 2; latitude 47°42.5' N., longitude 45°42' W.; depth 293 meters; dynamic height 970.917							
0	3.81	33.32	0	3.81	33.32	26.49	
24	3.57	33.45	25	3.60	33.46	26.63	
48	3.59	34.02	50	3.55	34.04	27.09	
72	3.12	34.19	75	3.05	34.21	27.27	
96	2.72	34.28	100	2.60	34.28	27.36	
144	1.59	34.27	150	1.75	34.28	27.43	
191	4.33	34.73	200	4.30	34.74	27.57	
278	4.00	34.83					
Station 5085; May 2; latitude 47°27' N., longitude 45°07' W.; depth 225 meters; dynamic height 970.938							
0	5.62	33.71	0	5.62	33.71	26.61	
27	5.45	33.74	25	5.50	33.73	26.63	
54	3.75	33.86	50	4.10	33.83	26.86	
81	2.89	34.07	75	3.00	34.03	27.13	
107	2.82	34.16	100	2.85	34.13	27.22	
162	3.93	34.54	150	3.75	34.46	27.40	
216	4.18	34.66	200	4.15	34.63	27.49	
Station 5086; May 2; latitude 47°21' N., longitude 44°51' W.; depth 157 meters; dynamic height 970.940							
0	5.56	33.72	0	5.56	33.72	26.62	
27	5.42	33.74	25	5.45	33.73	26.64	
53	3.24	33.94	50	3.60	33.92	26.99	
80	2.88	33.98	75	3.00	33.97	27.09	
107	2.94	34.03	100	2.95	34.01	27.12	
156	3.60	34.36	150	3.50	34.31	27.31	
Station 5087; May 2; latitude 47°19' N., longitude 45°08' W.; depth 200 meters; dynamic height 970.939							
0	5.50	33.78	0	5.50	33.78	26.67	
25	5.48	33.80	25	5.48	33.80	26.69	
51	5.21	33.82	50	5.25	33.81	26.73	
76	3.12	33.97	75	3.15	33.96	27.06	
101	2.93	34.10	100	2.95	34.09	27.18	
152	3.83	34.43	150	3.80	34.42	27.37	
182	4.01	34.64	(200)	4.10	34.76	27.61	

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5088; May 2-3; latitude 47°18' N., longitude 45°34' W.; depth 266 meters; dynamic height 970.946

0	5.36	33.65	0	5.36	33.65	26.59
25	5.30	33.65	25	5.30	33.65	26.59
50	4.72	33.74	50	4.72	33.74	26.73
75	2.82	33.91	75	2.82	33.91	27.06
100	2.68	34.08	100	2.68	34.08	27.19
150	3.84	34.45	150	3.84	34.45	27.39
200	4.20	34.66	200	4.20	34.66	27.52
250	4.25	34.79				

Station 5089; May 3; latitude 47°17.5' N., longitude 45°57' W.; depth 322 meters; dynamic height 970.936

0	4.35	33.32	0	4.35	33.32	26.43
25	5.46	33.73	25	5.46	33.73	26.64
49	3.49	33.91	50	3.50	33.91	26.99
74	3.27	34.11	75	3.25	34.11	27.17
98	2.95	34.17	100	2.95	34.17	27.25
147	3.17	34.40	150	3.20	34.41	27.42
197	3.93	34.62	200	3.95	34.62	27.51
295	4.16	34.88	300	4.15	34.88	27.69

Station 5090; May 3; latitude 47°16.5' N., longitude 46°34' W.; depth 732 meters; dynamic height 970.906

0	4.26	33.32	0	4.26	33.32	26.44
24	4.32	33.37	25	4.30	33.37	26.48
49	1.39	34.04	50	1.40	34.05	27.28
73	1.83	34.20	75	1.85	34.21	27.37
97	2.46	34.34	100	2.45	34.34	27.42
146	2.07	34.40	150	2.10	34.41	27.51
195	2.58	34.57	200	2.65	34.59	27.61
292	4.12	34.88	300	4.16	34.88	27.70
373	3.94	34.89	400	3.85	34.89	27.73
564	3.55	34.88	600	3.55	34.87	27.75
687	3.46	34.86				

Station 5091; May 3; latitude 47°16.5' N., longitude 46°41' W.; depth 1,152 meters; dynamic height 970.912

0	3.77	33.20	0	3.77	33.20	26.40
25	4.29	33.36	25	4.29	33.36	26.47
49	2.88	34.17	50	2.90	34.18	27.26
74	2.95	34.30	75	2.95	34.30	27.35
99	2.75	34.34	100	2.75	34.34	27.40
148	3.16	34.50	150	3.15	34.50	27.49
197	3.16	34.66	200	3.15	34.66	27.62
296	3.59	34.79	300	3.50	34.79	27.69
390	3.53	34.85	400	3.50	34.85	27.74
587	3.52	34.85	600	3.50	34.85	27.74
785	3.46	34.88	800	3.56	34.88	27.76
986	3.38	34.87	1,000	3.40	34.87	27.77

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5092; May 3; latitude 47°14.5' N., longitude 47°11' W.; depth 1,005 meters; dynamic height 970.924

0	4.06	33.23	0	4.06	33.23	26.39
23	4.12	33.23	25	4.10	33.24	26.40
46	1.78	33.86	50	1.65	33.91	27.14
69	1.43	34.11	75	1.35	34.13	27.34
92	1.26	34.17	100	1.25	34.18	27.39
138	1.75	34.23	150	1.85	34.29	27.43
184	2.04	34.48	200	2.10	34.51	27.59
276	2.43	34.61	300	2.60	34.66	27.67
341	3.02	34.74	400	3.35	34.80	27.71
523	3.56	34.87	600	3.55	34.87	27.75
714	3.47	34.86	(800)	3.50	34.87	27.76

Station 5093; May 3; latitude 47°11' N., longitude 47°47' W.; depth 220 meters; dynamic height 971.003

0	0.76	32.39	0	0.76	32.39	25.99
22	0.75	32.40	25	0.75	32.41	26.01
43	-1.29	32.98	50	-1.25	33.63	26.53
65	-0.99	33.12	75	-1.00	33.16	26.68
87	-1.05	33.22	100	-0.70	33.32	26.80
131	0.47	33.63	150	0.85	33.87	27.17
174	1.29	34.20	(200)	1.70	34.53	27.63

Station 5094; May 3; latitude 47°09.5' N., longitude 48°09' W.; depth 169 meters; dynamic height 971.004

0	1.17	32.46	0	1.17	32.46	26.02
23	1.15	32.48	25	1.15	32.49	26.04
45	-1.32	32.88	50	-1.30	32.93	26.50
68	-1.31	33.06	75	-1.30	33.09	26.63
90	-1.33	33.19	100	-1.05	33.29	26.78
136	0.52	33.67	(150)	0.95	33.90	27.18

Station 5095; May 3; latitude 47°07' N., longitude 48°36' W.; depth 115 meters; dynamic height 971.028

0	2.52	32.56	0	2.52	32.56	26.00
24	2.52	32.58	25	2.50	32.58	26.02
47	1.69	32.63	50	1.40	32.64	26.15
71	-0.16	32.73	75	-0.30	32.79	26.36
94	-0.66	33.04	100	-0.70	33.12	26.64

Station 5096; May 3; latitude 47°07' N., longitude 49°09' W.; depth 91 meters; dynamic height 971.032

0	2.80	32.54	0	2.80	32.54	25.96
27	2.83	32.57	25	2.80	32.56	25.97
53	1.16	32.75	50	1.35	32.74	26.23
80	-0.27	32.91	75	-0.05	32.89	26.42

Station 5097; May 3; latitude 46°49' N., longitude 48°45' W.; depth 96 meters; dynamic height 971.028

0	2.54	32.65	0	2.54	32.65	26.07
27	2.54	32.65	25	2.55	32.65	26.07
52	0.71	32.75	50	0.90	32.74	26.26
79	-0.56	32.92	75	-0.35	32.90	26.44

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5098; May 4; latitude 46°43' N., longitude 48°09' W.; depth 127 meters; dynamic height 971.020							
0	1.86	32.56		0	1.86	32.56	26.05
25	1.87	32.55		25	1.87	32.55	26.04
50	-1.05	32.82		50	-1.05	32.82	26.41
75	-1.17	33.02		75	-1.17	33.02	26.58
100	-0.75	33.20		100	-0.75	33.20	26.71
Station 5099; May 4; latitude 46°38.5' N., longitude 47°45' W.; depth 179 meters; dynamic height 971.016							
0	1.00	32.50		0	1.00	32.50	26.06
22	1.00	32.50		25	1.00	32.50	26.06
43	-0.21	32.67		50	-0.65	32.79	26.38
66	-1.27	33.07		75	-1.15	33.14	26.67
87	-0.85	33.24		100	-0.55	33.35	26.82
127	0.11	33.64		(150)	0.70	33.88	27.18
Station 5100; May 4; latitude 46°36.5' N., longitude 47°35' W.; depth 329 meters; dynamic height 970.962							
0	1.07	32.51		0	1.07	32.51	26.06
20	0.10	32.98		25	-0.25	32.97	26.50
41	-1.08	32.92		50	-0.80	33.10	26.62
61	-0.35	33.42		75	-0.10	33.57	26.98
82	-0.02	33.64		100	0.25	33.80	27.15
122	0.59	33.99		150	0.95	34.12	27.36
162	1.09	34.18		200	1.55	34.32	27.48
244	2.11	34.49		(300)	2.75	34.68	27.67
Station 5101; May 4; latitude 46°34' N., longitude 47°24' W.; depth 640 meters; dynamic height 970.910							
0	2.04	32.94		0	2.04	32.94	26.35
26	0.45	33.05		25	0.40	33.04	26.40
51	0.86	33.81		50	0.85	33.79	27.10
77	1.01	34.11		75	1.00	34.09	27.33
102	1.18	34.21		100	1.15	34.20	27.41
153	1.74	34.38		150	1.70	34.37	27.51
204	2.24	34.53		200	2.20	34.51	27.59
306	2.95	34.74		300	2.90	34.73	27.70
419	3.50	34.88		400	3.45	34.87	27.76
				(600)	3.60	34.89	27.76
Station 5102; May 4; latitude 46°33' N., longitude 47°16' W.; depth 1,097 meters; dynamic height 970.913							
0	2.66	32.99		0	2.66	32.99	26.34
28	3.39	33.22		25	3.35	33.17	26.41
55	2.25	34.08		50	2.35	33.94	27.11
83	2.50	34.35		75	2.40	34.30	27.40
110	2.70	34.41		100	2.70	34.38	27.43
166	2.03	34.48		150	2.20	34.46	27.55
222	2.42	34.60		200	2.25	34.55	27.61
332	3.29	34.77		300	3.05	34.73	27.68
444	3.55	34.84		400	3.50	34.82	27.72
663	3.50	34.88		600	3.50	34.88	27.76
881	3.49	34.88		800	3.50	34.88	27.76
1,039	3.48	34.88		1,000	3.50	34.88	27.76
Station 5103; May 4; latitude 46°32' N., longitude 47°07' W.; depth 723 meters; dynamic height 970.919							
0	2.39	32.98		0	2.39	32.98	26.35
23	2.41	33.00		25	2.40	33.08	26.43
47	1.67	33.86		50	1.55	33.88	27.12
70	0.82	33.98		75	0.85	34.01	27.28
94	1.23	34.18		100	1.30	34.22	27.42
141	1.87	34.42		150	1.95	34.44	27.55
187	2.16	34.51		200	2.30	34.53	27.59
281	3.08	34.72		300	3.20	34.75	27.69
362	3.49	34.81		400	3.50	34.82	27.72
559	3.51	34.88		(600)	3.55	34.88	27.75
Station 5104; May 4; latitude 46°30' N., longitude 48°28' W.; depth 914 meters; dynamic height 970.919							
0	3.29	33.21		0	3.29	33.21	26.46
23	3.23	33.25		25	3.15	33.27	26.51
47	1.81	34.01		50	1.75	34.02	27.23
70	1.21	34.15		75	1.20	34.17	27.39
94	1.55	34.24		100	1.60	34.25	27.42
140	1.77	34.41		150	2.00	34.44	27.54
186	2.66	34.57		200	2.85	34.61	27.61
280	3.62	34.80		300	3.65	34.81	27.69
263	3.54	34.78		400	3.65	34.83	27.70
427	3.62	34.84		600	3.55	34.84	27.72
615	3.50	34.84		(800)	3.50	34.86	27.75
Station 5105; May 4; latitude 46°35' N., longitude 47°08' W.; depth 423 meters; dynamic height 970.888							
0	5.61	33.91		0	5.61	33.91	26.77
22	5.61	33.91		25	5.50	33.92	26.78
44	3.81	34.10		50	3.40	34.13	27.17
66	2.86	34.20		75	2.90	34.24	27.31
88	3.15	34.33		100	3.30	34.40	27.40
133	3.61	34.55		150	3.70	34.61	27.53
177	3.78	34.68		200	3.80	34.71	27.60
265	3.87	34.78		300	3.80	34.81	27.68
372	3.69	34.86		(400)	3.60	34.88	27.75
Station 5106; May 4; latitude 46°38' N., longitude 45°29' W.; depth 218 meters; dynamic height 970.910							
0	5.31	33.82		0	5.31	33.82	26.73
23	5.30	33.82		25	5.30	33.82	26.73
46	4.66	33.92		50	4.45	33.95	26.92
70	3.25	34.10		75	3.05	34.12	27.20
92	2.67	34.18		100	2.65	34.20	27.30
139	2.68	34.34		150	2.85	34.39	27.43
185	3.87	34.65		(200)	4.10	34.75	27.60
Station 5107; May 4; latitude 46°41' N., longitude 44°56' W.; depth 194 meters; dynamic height 970.918							
0	5.36	33.84		0	5.36	33.84	26.74
26	5.35	33.84		25	5.35	33.84	26.74
52	5.01	33.805		50	5.10	33.81	26.75
78	2.68	34.04		75	2.85	34.00	27.12
104	2.74	34.22		100	2.70	34.19	27.28
156	3.39	34.47		150	3.30	34.44	27.43

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5108; May 4; latitude 46°42' N., longitude 44°40' W.; depth 183 meters; dynamic height 970.909								Station 5112; May 5; latitude 45°53' N., longitude 44°36' W.; depth 3,841 meters; dynamic height 970.962							
0	5.35	33.87		0	5.35	33.87	26.77	0	5.59	33.61		0	5.59	33.61	26.53
28	5.34	33.88		25	5.35	33.87	26.77	22	5.60	33.70		25	5.60	33.71	26.61
55	2.81	34.08		50	3.15	34.04	27.12	44	5.38	33.75		50	5.00	33.79	26.74
83	2.70	34.18		75	2.70	34.15	27.25	66	3.89	33.96		75	3.70	34.03	27.06
110	2.73	34.26		100	2.70	34.22	27.31	87	3.61	34.12		100	3.65	34.22	27.23
165	3.84	34.60		150	3.50	34.50	27.46	131	4.17	34.44		150	4.05	34.48	27.39
Station 5109; May 4; latitude 46°34' N., longitude 44°40' W.; depth 277 meters; dynamic height 970.918								175	3.90	34.54		200	3.70	34.59	27.51
0	5.04	33.64		0	5.04	33.64	26.61	202	3.47	34.72		300	3.55	34.75	27.65
25	5.03	33.64		25	5.03	33.64	26.61	415	3.88	34.82		400	3.85	34.81	27.67
50	3.24	34.00		50	3.24	34.00	27.08	616	3.75	34.90		600	3.75	34.89	27.74
75	2.70	34.14		75	2.70	34.14	27.24	814	3.75	34.89		800	3.65	34.88	27.74
100	2.77	34.26		100	2.77	34.26	27.34	1,022	3.53	34.88		1,000	3.55	34.88	27.75
150	2.70	34.46		150	2.70	34.46	27.50	1,549	3.36	34.88					
200	3.97	34.72		200	3.97	34.72	27.59								
Station 5110; May 5; latitude 46°25.5' N., longitude 44°39' W.; depth 605 meters; dynamic height 970.906								Station 5113; May 5; latitude 45°57.5' N., longitude 45°12' W.; depth 3,146 meters; dynamic height 970.951							
0	4.58	33.54		0	4.58	33.54	26.58	0	5.63	33.43		0	5.63	33.43	26.37
22	4.51	33.57		25	4.50	33.59	26.64	25	5.69	33.49		25	5.69	33.49	26.42
43	3.16	33.90		50	2.85	33.95	27.08	50	4.04	33.97		50	4.04	33.97	26.98
64	2.46	34.06		75	2.55	34.18	27.29	75	3.52	34.19		75	3.52	34.19	27.21
85	2.69	34.27		100	2.60	34.33	27.40	100	3.66	34.34		100	3.66	34.34	27.32
128	2.49	34.43		150	3.05	34.56	27.55	150	3.89	34.54		150	3.89	34.54	27.45
171	3.57	34.66		200	3.75	34.76	27.64	200	5.03	34.84		200	5.03	34.84	27.56
256	3.64	34.84		300	3.65	34.85	27.72	300	4.27	34.85		300	4.27	34.85	27.68
218	3.84	34.80		(400)	3.60	34.86	27.74	350	4.09	34.85		400	4.05	34.86	27.69
374	3.62	34.86		(600)	3.55	34.87	27.75	525	4.06	34.91		600	4.00	34.91	27.74
Station 5111; May 5; latitude 46°19' N., longitude 44°38' W.; depth 2,140 meters; dynamic height 970.889								701	3.78	34.91		800	3.75	34.90	27.75
0	4.55	33.52		0	4.55	33.52	26.58	886	3.67	34.89		1,000	3.65	34.89	27.75
23	4.65	33.57		25	4.65	33.61	26.64	1,366	3.55	34.90					
45	3.81	34.31		50	3.65	34.33	27.31	Station 5114; May 5; latitude 45°58' N., longitude 45°54' W.; depth 2,177 meters; dynamic height 970.959							
68	3.17	34.43		75	3.05	34.45	27.46	0	6.47	33.63		0	6.47	33.63	26.43
91	2.88	34.52		100	2.90	34.54	27.55	23	6.25	33.64		25	6.20	33.64	26.47
137	3.10	34.59		150	3.25	34.65	27.60	46	5.02	33.77		50	4.75	33.81	26.78
182	3.57	34.79		200	3.65	34.80	27.68	68	3.76	34.06		75	3.60	34.11	27.14
273	3.72	34.85		300	3.75	34.85	27.71	91	3.43	34.19		100	3.30	34.22	27.26
252	3.64	34.82		400	3.75	34.88	27.73	136	2.98	34.32		150	3.25	34.41	27.41
376	3.74	34.88		600	3.60	34.88	27.75	181	4.11	34.64		200	4.05	34.67	27.54
500	3.63	34.89		800	3.55	34.88	27.75	272	3.30	34.68		300	3.75	34.76	27.64
648	3.58	34.88		1,000	3.50	34.88	27.76	289	4.30	34.82		400	3.60	34.81	27.70
1,058	3.45	34.88						425	3.59	34.82		600	3.55	34.86	27.74
Station 5115; May 5; latitude 45°58' N., longitude 46°37' W.; depth 549 meters; dynamic height 970.939								554	4.24	34.86		800	3.55	34.86	27.74
0	2.39	32.76		0	2.39	32.76	26.17	728	3.55	34.86		1,000	3.50	34.86	27.75
27	2.52	33.15		25	2.55	33.11	26.43	1,226	3.39	34.86					
54	1.72	33.76		50	1.85	33.66	26.93	Station 5116; May 5; latitude 45°58' N., longitude 46°37' W.; depth 549 meters; dynamic height 970.939							
82	0.76	33.94		75	0.85	33.89	27.18	0	2.39	32.76		0	2.39	32.76	26.17
109	1.43	34.13		100	1.10	34.06	27.31	27	2.52	33.15		25	2.55	33.11	26.43
163	3.85	34.59		150	3.30	34.49	27.47	54	1.72	33.76		50	1.85	33.66	26.93
217	4.17	34.75		200	4.10	34.71	27.57	82	0.76	33.94		75	0.85	33.89	27.18
326	3.74	34.78		300	3.80	34.77	27.65	109	1.43	34.13		100	1.10	34.06	27.31
398	4.18	34.91		400	4.15	34.91	27.72	163	3.85	34.59		150	3.30	34.49	27.47
527	3.69	34.89						217	4.17	34.75		200	4.10	34.71	27.57
								326	3.74	34.78		300	3.80	34.77	27.65
								398	4.18	34.91		400	4.15	34.91	27.72
								527	3.69	34.89					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5116; May 6; latitude 46°02' N., longitude 47°08' W.; depth 1,490 meters; dynamic height 970.926

0	3.64	33.06	0	3.64	33.06	26.29
23	3.37	33.17	25	3.30	33.18	26.43
45	1.92	33.77	50	1.75	33.87	27.11
68	1.36	34.13	75	1.40	34.17	27.38
90	1.69	34.28	100	1.85	34.23	27.38
135	2.42	34.49	150	2.50	34.51	27.56
180	2.66	34.56	200	2.80	34.60	27.60
270	3.38	34.77	300	3.45	34.79	27.69
305	3.47	34.79	400	3.50	34.80	27.70
457	3.53	34.80	600	3.80	34.88	27.73
609	3.76	34.88	800	3.50	34.86	27.75
783	3.49	34.86	1,000	3.45	34.87	27.76
1,153	3.43	34.88				

Station 5117; May 6; latitude 46°05.5' N., longitude 47°33' W.; depth 695 meters; dynamic height 970.928

0	2.07	32.86	0	2.07	32.86	26.28
23	2.03	32.97	25	2.05	33.00	26.40
46	1.02	33.56	50	0.95	33.65	26.98
70	0.87	33.93	75	0.90	33.98	27.25
93	1.06	34.11	100	1.10	34.13	27.36
139	1.38	34.27	150	1.50	34.31	27.48
185	1.92	34.42	200	2.05	34.45	27.55
278	2.41	34.59	300	2.55	34.62	27.65
393	3.13	34.76	400	3.15	34.77	27.71
560	3.49	34.86	(600)	3.50	34.87	27.76

Station 5118; May 6; latitude 46°08' N., longitude 47°51' W.; depth 176 meters; dynamic height 970.995

0	1.24	32.48	0	1.24	32.48	26.03
24	-0.13	32.64	25	-0.15	32.65	26.24
47	-1.05	33.08	50	-1.05	33.11	26.64
71	-0.81	33.30	75	-0.70	33.35	26.82
95	0.15	33.54	100	0.25	33.57	26.97
142	0.62	33.82	(150)	0.70	33.85	27.16

Station 5119; May 6; latitude 46°10' N., longitude 48°06' W.; depth 119 meters; dynamic height 971.013

0	1.99	32.55	0	1.99	32.55	26.04
24	1.56	32.56	25	1.50	32.56	26.08
48	-1.12	32.90	50	-1.15	32.93	26.50
73	-1.05	33.13	75	-1.00	33.14	26.67
			(100)	-0.40	33.33	26.80

Station 5120; May 6; latitude 46°13.5' N., longitude 48°35' W.; depth 93 meters; dynamic height 971.022

0	2.64	32.66	0	2.64	32.66	26.07
24	2.51	32.66	25	2.50	32.66	26.08
48	0.49	32.78	50	0.30	32.79	26.33
73	-0.74	33.00	75	-0.80	33.01	26.56

0	3.03	32.68	0	3.03	32.68	26.06
25	1.96	32.72	25	2.00	32.72	26.17
51	-0.42	32.90	50	-0.40	32.89	26.44

Station 5121; May 6; latitude 46°16' N., longitude 48°58' W.; depth 73 meters; dynamic height 971.019

Station 5122; May 6; latitude 46°08' N., longitude 48°44' W.; depth 91 meters; dynamic height 971.025

0	2.51	32.66	0	2.51	32.66	26.08
26	2.47	32.66	25	2.50	32.66	26.08
52	-0.18	32.82	50	-0.05	32.81	26.37
78	-0.47	33.01	75	-0.45	32.98	26.52

Station 5123; May 6; latitude 45°57' N., longitude 48°26' W.; depth 115 meters; dynamic height 971.012

0	1.39	32.53	0	1.39	32.53	26.06
26	0.91	32.57	25	0.95	32.57	26.12
51	-1.44	32.99	50	-1.40	32.98	26.55
76	-1.40	33.22	75	-1.40	33.21	26.74
101	-0.16	33.49	100	-0.25	33.48	26.91

Station 5124; May 6; latitude 45°54.5' N., longitude 48°21' W.; depth 190 meters; dynamic height 971.001

0	1.61	32.53	0	1.61	32.53	26.04
25	0.28	32.68	25	0.28	32.68	26.25
50	-0.83	33.11	50	-0.83	33.11	26.63
75	-0.34	33.39	75	-0.34	33.39	26.84
99	0.31	33.70	100	0.30	33.70	27.06
150	0.54	33.82	150	0.55	33.82	27.15

Station 5125; May 6; latitude 45°50' N., longitude 48°14' W.; depth 732 meters; dynamic height 970.963

0	1.59	32.56	0	1.59	32.56	26.07
23	1.80	32.80	25	1.80	32.84	26.28
47	0.37	33.42	50	0.40	33.47	26.88
70	0.49	33.77	75	0.65	33.83	27.14
93	1.18	34.02	100	1.20	34.05	27.29
140	1.32	34.21	150	1.45	34.25	27.43
188	2.00	34.42	200	2.05	34.45	27.55
279	2.33	34.57	300	2.45	34.60	27.63
373	2.94	34.70	400	3.05	34.73	27.68
561	*3.44	34.86	(600)	3.50	34.87	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5126; May 6; latitude 45°40' N., longitude 47°58' W.; depth 1,353 meters; dynamic height 970.957

0	2.53	32.72	0	2.53	32.72	26.13
23	2.49	32.76	25	2.45	32.84	26.23
47	0.84	33.73	50	0.85	33.77	27.09
70	1.25	34.62	75	1.30	34.04	27.27
94	1.38	34.13	100	1.40	34.14	27.35
140	1.56	34.27	150	1.65	34.30	27.46
186	2.09	34.43	200	2.30	34.48	27.55
280	3.36	34.72	300	3.55	34.77	27.67
331	3.73	34.82	400	3.70	34.83	27.70
500	3.60	34.84	600	3.55	34.83	27.71
670	3.50	34.83	800	3.50	34.83	27.72
844	3.48	34.83	1,000	3.46	34.85	27.75
1,109	3.38	34.85				

Station 5127; May 6; latitude 45°17' N., longitude 47°18' W.; depth 2,999 meters; dynamic height 970.979

0	2.67	32.68	0	2.67	32.68	26.09
24	3.62	33.42	25	3.60	33.44	26.61
48	3.40	33.74	50	3.35	33.74	26.87
73	2.52	33.76	75	2.50	33.78	26.97
97	3.40	34.11	100	3.50	34.13	27.16
144	4.15	34.48	150	4.15	34.49	27.38
193	3.92	34.59	200	3.90	34.60	27.50
290	4.00	34.76	300	4.00	34.77	27.63
378	3.81	34.81	400	3.80	34.82	27.69
566	3.77	34.85	600	3.75	34.85	27.71
753	3.57	34.86	800	3.55	34.86	27.74
938	3.50	34.86	1,000	3.50	34.86	27.75
1,400	3.37	34.89				

Station 5128; May 7; latitude 45°19' N., longitude 46°25' W.; depth 2,438 meters; dynamic height 970.934

0	6.53	33.62	0	6.53	33.62	26.42
24	5.97	33.66	25	5.90	33.66	26.53
49	4.15	34.00	50	4.16	34.00	27.00
73	3.36	34.16	75	3.35	34.17	27.21
98	3.35	34.32	100	3.35	34.33	27.33
146	3.66	34.51	150	3.70	34.53	27.46
194	4.14	34.72	200	4.20	34.74	27.58
292	4.49	34.91	300	4.50	34.91	27.68
380	4.07	34.89	400	3.95	34.89	27.72
569	3.68	34.89	600	3.65	34.89	27.75
756	3.55	34.88	800	3.55	34.88	27.75
946	3.50	34.87	1,000	3.50	34.87	27.76
1,425	3.40	34.89				

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5129; May 7; latitude 45°21' N., longitude 45°33' W.; depth 3,823 meters; dynamic height 971.015

0	6.49	33.38	0	6.49	33.38	26.22
24	6.54	33.59	25	6.55	33.62	26.42
47	6.56	34.22	50	6.55	34.25	26.91
71	7.16	34.45	75	7.35	34.50	27.00
94	8.34	34.72	100	8.20	34.70	27.03
141	5.92	34.49	150	5.45	34.45	27.21
189	3.88	34.38	200	3.95	34.40	27.34
283	5.14	34.83	300	4.75	34.81	27.58
324	4.28	34.78	400	4.25	34.85	27.66
489	4.22	34.90	600	4.10	34.90	27.72
656	4.00	34.90	800	3.85	34.90	27.74
825	3.78	34.90	1,000	3.70	34.90	27.76
1,256	3.52	34.90				

Station 5130; May 7; latitude 45°23' N., longitude 44°44' W.; depth 4,298 meters; dynamic height 971.178

0	13.45	35.39	0	13.45	35.39	26.62
23	13.52	35.43	25	13.60	35.48	26.66
45	14.88	35.89	50	14.90	35.90	26.70
68	14.88	35.91	75	14.25	35.77	26.75
91	12.29	35.34	100	12.05	35.30	26.83
136	11.47	35.23	150	11.35	35.22	26.90
191	10.95	35.19	200	10.85	35.19	26.97
272	10.00	35.23	300	9.35	35.17	27.21
358	7.82	35.01	400	7.25	35.01	27.41
542	5.94	35.03	600	5.50	34.99	27.62
729	4.85	34.97	800	4.60	34.96	27.71
912	4.31	34.95	1,000	4.20	34.94	27.74
1,369	3.69	34.92				

Station 5131; May 7; latitude 44°51' N., longitude 45°05' W.; depth 4,295 meters; dynamic height 971.146

0	12.32	35.46	0	13.30	35.46	26.71
24	14.34	35.72	25	14.35	35.74	26.70
48	15.00	36.00	50	15.00	36.00	26.76
73	15.00	36.01	75	15.00	36.00	26.76
97	14.26	35.83	100	14.15	35.81	26.80
145	12.78	35.55	150	12.70	35.54	26.89
193	11.53	35.37	200	11.35	35.35	27.00
290	8.96	35.09	300	8.60	35.06	27.25
372	6.28	34.84	400	6.00	34.85	27.46
564	4.92	34.91	600	4.80	34.92	27.66
760	4.34	34.94	800	4.25	34.94	27.73
951	4.03	34.94	1,000	4.00	34.94	27.76
1,429	*3.59	34.90				

Station 5132; May 7; latitude 44°20' N., longitude 45°24' W.; depth 4,262 meters; dynamic height 970.969

0	7.71	33.51	0	7.71	33.51	26.17
24	7.00	33.66	25	6.95	33.66	26.40
48	5.09	33.83	50	4.95	33.84	26.78
72	4.01	33.98	75	3.90	33.99	27.01
96	3.58	34.13	100	3.60	34.15	27.17
144	3.73	34.42	150	3.80	34.44	27.38
191	3.88	34.57	200	3.90	34.59	27.49
287	4.19	34.82	300	4.20	34.84	27.66
368	4.14	34.89	400	4.15	34.90	27.71
559	3.95	34.91	600	3.90	34.91	27.75
755	3.69	34.89	800	3.65	34.89	27.75
945	3.60	34.90	1,000	3.60	34.90	27.77
1,419	3.42	34.88				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5133; May 7; latitude 44°25.5' N., longitude 45°55' W.; depth 3,841 meters; dynamic height 971.043							
0	6.45	33.33		0	6.45	33.33	26.19
24	6.47	33.50		25	6.50	33.55	26.36
48	9.70	34.90		50	9.65	34.89	26.94
72	8.84	34.79		75	8.85	34.80	27.01
96	9.04	34.91		100	9.05	34.91	27.06
144	8.43	34.94		150	8.30	34.93	27.19
191	6.82	34.79		200	6.65	34.78	27.31
287	5.42	34.77		300	5.30	34.77	27.48
362	4.78	34.82		400	4.70	34.85	27.61
545	4.45	34.92		600	4.35	34.92	27.71
729	4.14	34.92		800	4.00	34.91	27.74
913	3.81	34.90		1,000	3.75	34.90	27.75
1,379	3.46	34.88					
Station 5134; May 8; latitude 44°32.5' N., longitude 46°34' W.; depth 3,695 meters; dynamic height 971.165							
0	8.59	33.86		0	8.59	33.86	26.31
23	14.20	35.65		25	14.20	35.65	26.66
47	13.94	35.63		50	13.85	35.62	26.72
70	13.45	35.60		75	13.35	35.59	26.79
93	13.12	35.54		100	13.10	35.54	26.81
140	12.90	35.54		150	12.35	35.43	26.87
187	9.75	34.91		200	9.75	34.94	26.96
280	9.84	35.21		300	9.10	35.11	27.21
363	6.06	34.74		400	5.90	34.78	27.41
550	5.25	34.94		600	5.00	34.94	27.65
740	4.41	34.92		800	4.20	34.92	27.73
925	4.14	34.93		1,000	4.05	34.93	27.74
1,390	3.53	34.89					
Station 5135; May 8; latitude 44°40.5' N., longitude 47°17' W.; depth 3,841 meters; dynamic height 971.043							
0	7.58	33.56		0	7.58	33.56	26.23
18	8.42	33.99		25	9.00	34.30	26.59
36	9.66	34.76		50	7.25	34.44	26.96
54	6.78	34.36		75	7.55	34.55	27.00
72	7.53	34.55		100	7.30	34.56	27.05
109	7.21	34.57		150	7.85	34.84	27.19
145	7.92	34.85		200	5.65	34.62	27.32
217	5.00	34.56		300	6.05	34.89	27.48
314	6.19	34.94		400	5.10	34.88	27.59
481	4.37	34.83		600	4.40	34.91	27.69
656	4.44	34.94		800	4.20	34.94	27.74
831	4.16	34.94		1,000	3.95	34.93	27.75
1,288	3.58	34.90					
Station 5136; May 8; latitude 44°48.5' N., longitude 47°58' W.; depth 3,365 meters; dynamic height 971.022							
0	3.99	32.70		0	3.99	32.70	25.98
25	5.36	33.78		25	5.36	33.78	26.69
49	7.89	34.57		50	7.90	34.57	26.97
74	7.24	34.53		75	7.25	34.53	27.03
98	7.54	34.66		100	7.60	34.67	27.10
148	8.07	34.99		150	8.10	34.99	27.27
196	5.47	34.64		200	5.45	34.64	27.35
294	5.40	34.84		300	5.45	34.84	27.51
376	5.11	34.88		400	5.05	34.89	27.60
569	4.39	34.92		600	4.30	34.92	27.71
766	4.06	34.94		800	4.00	34.93	27.75
959	3.71	34.905		1,000	3.70	34.90	27.76
1,445	3.40	34.88					
Station 5137; May 8; latitude 44°51.5' N., longitude 48°24' W.; depth 2,661 meters; dynamic height 970.972							
0	2.35	32.49		0	2.35	32.49	25.95
26	0.47	32.68		25	0.50	32.67	26.23
51	-0.13	33.28		50	-0.10	33.26	26.72
78	2.48	33.83		75	2.15	33.77	27.00
413	3.97	34.89		100	3.15	34.14	27.20
629	3.75	34.86		150	3.80	34.48	27.41
853	3.70	34.91		200	4.15	34.69	27.54
1,064	3.43	34.88		300	4.25	34.89	27.69
1,586	3.39	34.88		400	4.05	34.89	27.71
				600	3.75	34.86	27.72
				800	3.70	34.90	27.76
				1,000	3.50	34.89	27.77
Station 5138; May 8; latitude 44°53' N., longitude 48°36' W.; depth 2,286 meters; dynamic height 970.930							
0	2.66	32.52		0	2.66	32.52	25.96
25	1.62	32.80		25	1.62	32.80	26.27
50	1.23	33.68		50	1.23	33.68	26.98
75	1.06	34.04		75	1.06	34.04	27.29
100	1.22	34.18		100	1.22	34.18	27.39
150	2.08	34.46		150	2.08	34.46	27.55
199	2.72	34.60		200	2.75	34.60	27.61
299	3.43	34.80		300	3.45	34.80	27.70
395	3.89	34.89		400	3.95	34.89	27.72
595	3.72	34.89		600	3.70	34.89	27.75
797	3.56	34.88		800	3.55	34.88	27.75
995	3.46	34.87		1,000	3.45	34.87	27.76
1,486	3.38	34.89					
Station 5139; May 8; latitude 44°56' N., longitude 48°50' W.; depth 1,054 meters; dynamic height 971.059							
0	1.51	32.42		0	1.51	32.42	25.97
25	-1.26	32.90		25	-1.26	32.90	26.48
50	-0.77	33.12		50	-0.77	33.12	26.64
74	-0.12	33.33		75	-0.15	33.33	26.79
99	-0.08	33.52		100	-0.05	33.53	26.94
149	0.48	33.80		150	0.50	33.90	27.21
198	0.80	33.96		200	0.80	33.97	27.25
297	1.56	34.24		300	1.60	34.25	27.42
400	*2.35	34.53		400	2.35	34.53	27.58
604	3.48	34.80		600	3.45	34.80	27.70
800	3.54	34.85		800	3.55	34.85	27.73
954	3.49	34.845		(1,000)	3.50	34.85	27.74
Station 5140; May 8; latitude 44°57' N., longitude 48°56' W.; depth 842 meters; dynamic height 971.080							
0	2.82	32.60		0	2.82	32.60	26.01
25	-0.90	32.89		25	-0.90	32.89	26.46
50	-0.89	33.06		50	-0.89	33.06	26.60
75	-0.77	33.10		75	-0.77	33.10	26.62
99	-0.50	33.20		100	-0.50	33.20	26.70
149	-0.52	33.36		150	-0.50	33.36	26.82
199	0.93	33.96		200	0.95	33.96	27.23
298	1.74	34.30		300	1.80	34.30	27.45
50	*-0.85	33.06		400	2.70	34.59	27.60
252	1.23	34.18		(600)	3.50	34.85	27.74
399	2.67	34.59		(800)	3.45	34.85	27.74

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5141; May 9; latitude 45°00' N., longitude 49°08' W.; depth 132 meters; dynamic height 971.097.						
0	3.57	32.68	0	3.57	32.68	26.01
25	2.43	32.68	25	2.43	32.68	26.10
50	0.35	32.80	50	0.35	32.80	26.34
76	-0.50	32.92	75	-0.45	32.92	26.47
111	-0.94	32.98	100	-0.85	32.97	26.52

Station 5142; May 27; latitude 50°00' N., longitude 49°00' W.; depth 1,884 meters; dynamic height 970.852.

0	3.91	33.58	0	3.91	33.58	26.69
24	3.94	33.60	25	3.90	33.60	26.71
48	1.42	34.16	50	1.40	34.20	27.40
72	1.95	34.43	75	2.00	34.44	27.54
96	2.24	34.52	100	2.25	34.52	27.59
144	2.62	34.65	150	2.65	34.66	27.67
192	2.99	34.76	200	3.00	34.77	27.73
288	3.12	34.81	300	3.15	34.81	27.74
322	3.15	34.82	400	3.25	34.84	27.75
493	3.29	34.86	600	3.25	34.86	27.77
672	3.26	34.86	800	3.25	34.87	27.78
851	3.27	34.88	1,000	3.25	34.88	27.78
1,317	3.28	34.89				

Station 5143; May 28; latitude 49°49' N., longitude 49°34' W.; depth 1,353 meters; dynamic height 970.915.

0	2.42	32.98	0	2.42	32.98	26.34
25	1.89	33.06	25	1.89	33.06	26.45
49	-0.18	33.75	50	0.15	33.77	27.13
356	3.09	34.78	75	0.75	34.02	27.30
583	3.45	34.86	100	1.15	34.18	27.39
783	3.52	34.88	150	1.80	34.40	27.53
979	3.51	34.88	200	2.20	34.55	27.62
1,272	3.33	34.90	300	2.70	34.70	27.69
			400	3.20	34.79	27.72
			600	3.45	34.86	27.75
			800	3.50	34.88	27.76
			1,000	3.50	34.88	27.76

Station 5144; May 28; latitude 49°39' N., longitude 50°00' W.; depth 640 meters; dynamic height 970.911.

0	2.55	32.84	0	2.55	32.84	26.22
23	2.42	32.85	25	2.35	32.85	26.24
47	0.47	33.68	50	0.45	33.70	27.05
70	0.60	33.96	75	0.70	34.00	27.28
93	1.18	34.18	100	1.30	34.23	27.43
140	1.94	34.46	150	2.00	34.48	27.57
186	2.25	34.56	200	2.35	34.58	27.62
279	2.78	34.70	300	2.90	34.73	27.70
368	3.25	34.80	400	3.35	34.83	27.73
572	3.46	34.89	(600)	3.45	34.89	27.77

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5145; May 28; latitude 49°31' N., longitude 50°33' W.; depth 331 meters; dynamic height 970.963.						
0	2.21	32.89	0	2.21	32.89	26.28
24	2.02	32.90	25	2.00	32.90	26.31
47	1.85	32.90	50	1.80	32.90	26.32
71	-0.22	33.52	75	-0.20	33.56	26.98
94	0.00	33.73	100	0.05	33.76	27.13
141	0.45	34.02	150	0.65	34.08	27.34
188	1.53	34.34	200	1.70	34.40	27.53
282	2.74	34.69	(300)	2.90	34.73	27.70

Station 5146; May 28; latitude 49°22' N., longitude 51°05' W.; depth 340 meters; dynamic height 970.977.

0	2.32	32.84	0	2.32	32.84	26.24
24	2.27	32.90	25	2.25	32.91	26.30
47	0.72	33.01	50	0.55	33.03	26.51
71	-1.26	33.34	75	-1.20	33.39	26.88
94	-0.36	33.58	100	-0.25	33.62	27.03
141	0.41	33.90	150	0.55	33.96	27.26
188	1.35	34.22	200	1.55	34.28	27.44
282	2.54	34.62	(300)	2.70	34.67	27.67

Station 5147; May 28; latitude 49°10.5' N., longitude 51°34' W.; depth 318 meters; dynamic height 971.025

0	1.47	32.65	0	1.47	32.65	26.15
21	1.46	32.65	25	1.40	32.65	26.16
42	0.33	32.74	50	-0.45	32.87	26.43
62	-1.64	33.22	75	-1.60	33.27	26.79
83	-1.54	33.29	100	-1.45	33.34	26.84
125	-1.12	33.43	150	-0.45	33.60	27.02
167	0.04	33.74	200	0.50	33.92	27.23
250	1.12	34.16	(300)	1.60	34.40	27.54

Station 5148; May 28; latitude 49°05.5' N., longitude 51°54' W.; depth 293 meters; dynamic height 971.012

0	2.20	32.77	0	2.20	32.77	26.19
21	2.00	32.81	25	1.85	32.82	26.26
42	0.57	32.96	50	-0.25	33.02	26.54
63	-1.63	33.11	75	-1.70	33.15	26.70
84	-1.73	33.18	100	-1.70	33.22	26.75
126	-1.60	33.28	150	-0.65	33.54	26.98
168	0.16	33.77	200	1.05	34.12	27.36
229	1.74	34.36				

Station 5149; May 28; latitude 49°01' N., longitude 52°08' W.; depth 293 meters; dynamic height 971.046

0	1.60	32.24	0	1.60	32.24	25.81
23	1.54	32.24	25	1.50	32.24	25.82
44	0.02	32.86	50	-0.45	32.94	26.49
67	-1.41	33.12	75	-1.60	33.15	26.69
89	-1.73	33.18	100	-1.70	33.21	26.75
134	-0.96	33.42	150	-0.70	33.51	26.96
178	-0.10	33.68	200	0.35	33.83	27.16
243	1.38	34.15				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5150; May 28; latitude 48°54.5' N., longitude 52°25' W.; depth 348 meters; dynamic height 971.058								Station 5155; May 29; latitude 48°19.5' N., longitude 52°02' W.; depth 176 meters; dynamic height 971.081							
0	1.70	32.32		0	1.70	32.32	25.87	0	2.38	32.19		0	2.38	32.19	25.71
25	1.69	32.33		25	1.69	32.33	25.88	24	2.31	32.26		25	2.30	32.27	25.79
49	-1.36	33.05		50	-1.40	33.06	26.61	49	-1.18	32.96		50	-1.20	32.97	26.54
74	-1.73	33.17		75	-1.70	33.17	26.71	73	-1.44	33.12		75	-1.45	33.12	26.66
98	-1.63	33.22		100	-1.60	33.22	26.75	97	-1.63	33.18		100	-1.65	33.18	26.71
148	-1.36	33.36		150	-1.35	33.37	26.86	146	-1.49	33.27		150	-1.50	33.28	26.79
197	-0.16	33.68		200	-0.10	33.70	27.08								
295	1.64	34.30		300	1.70	34.32	27.47								
Station 5151; May 28; latitude 48°50' N., longitude 52°40' W.; depth 220 meters; dynamic height 971.087								Station 5156; May 29; latitude 48°16' N., longitude 51°54' W.; depth 183 meters; dynamic height 971.066							
0	1.35	31.99		0	1.35	31.99	25.63	0	2.85	32.31		0	2.85	32.31	25.77
26	1.71	32.49		25	1.70	32.47	25.99	25	2.06	32.59		25	2.06	32.59	26.07
52	-1.73	33.03		50	-1.70	33.01	26.58	49	-0.26	32.96		50	-0.40	32.96	26.50
78	-1.71	33.13		75	-1.70	33.12	26.67	74	-1.64	33.20		75	-1.65	33.20	26.73
104	-1.65	33.18		100	-1.65	33.17	26.71	99	-1.55	33.27		100	-1.55	33.27	26.79
157	-1.39	33.27		150	-1.45	33.26	26.77	148	-1.06	33.40		150	-1.05	33.40	26.88
209	0.01			(200)	-0.40	33.55	26.94								
Station 5152; May 28; latitude 48°45' N., longitude 52°52' W.; depth 114 meters; dynamic height 971.087								Station 5157; May 29; latitude 48°07.5' N., longitude 51°37' W.; depth 187 meters; dynamic height 971.059							
0	1.86	31.75		0	1.86	31.75	25.40	0	2.94	32.25		0	2.94	32.25	25.72
26	-1.35	32.91		25	-1.35	32.88	26.46	25	2.47	32.46		25	2.47	32.46	25.92
53	-1.40	32.91		50	-1.40	32.91	26.49	50	-1.08	32.96		50	-1.08	32.96	26.52
80	-1.59	33.07		75	-1.55	33.03	26.59	76	-1.58	33.23		75	-1.60	33.22	26.75
106	-1.58	33.11		100	-1.60	33.10	26.65	100	-0.56	33.39		100	-0.55	33.39	26.85
								151	0.36	33.70		150	0.30	33.69	27.05
Station 5153; May 28-29; latitude 48°39' N., longitude 52°46' W.; depth 117 meters; dynamic height 971.105								Station 5158; May 29; latitude 47°57' N., longitude 51°11' W.; depth 157 meters; dynamic height 971.066							
0	1.64	31.91		0	1.64	31.91	25.55	0	2.97	32.04		0	2.97	32.04	25.56
26	1.15	32.08		25	1.20	32.07	25.71	25	2.73	32.11		25	2.73	32.11	25.62
52	-1.44	32.90		50	-1.40	32.53	26.43	49	-1.33	33.00		50	-1.35	33.01	26.58
79	-1.54	33.04		75	-1.50	33.02	26.58	74	-1.60	33.19		75	-1.60	33.19	26.72
105	-1.53	33.10		100	-1.55	33.09	26.64	99	-1.57	33.26		100	-1.55	33.26	26.78
								138	0.09	33.64		(150)	0.45	33.76	27.10
Station 5154; May 29; latitude 48°34' N., longitude 52°36' W.; depth 256 meters; dynamic height 971.075								Station 5159; May 30; latitude 47°51' N., longitude 50°59' W.; depth 119 meters; dynamic height 971.067							
0	1.02	32.50		0	1.02	32.50	26.06	0	2.88	32.12		0	2.88	32.12	25.63
26	0.95	32.52		25	0.95	32.52	26.08	26	2.84	32.13		25	2.85	32.13	25.64
52	-1.30	33.01		50	-1.20	32.97	26.54	52	-1.14	33.00		50	-1.10	32.96	26.52
78	-1.70	33.12		75	-1.65	33.11	26.66	78	-0.56	33.22		75	-0.60	33.21	26.71
104	-1.68	33.16		100	-1.70	33.15	26.70	104	-0.34	33.32		100	-0.40	33.30	26.77
156	-1.39	33.24		150	-1.45	33.23	26.75								
208	-1.02	33.42		200	-1.10	33.37	26.85								
239	0.15	33.72													
Station 5160; May 30; latitude 47°43' N., longitude 50°41' W.; depth 108 meters; dynamic height 971.071								Station 5160; May 30; latitude 47°43' N., longitude 50°41' W.; depth 108 meters; dynamic height 971.071							
0	3.09	32.09		0	3.09	32.09	25.58	0	3.09	32.09		0	3.09	32.09	25.58
26	2.36	32.28		25	2.45	32.27	25.77	26	2.36	32.28		25	2.45	32.27	25.77
52	-1.04	32.83		50	-0.95	32.80	26.39	52	-1.04	32.83		50	-0.95	32.80	26.39
77	-1.21	33.02		75	-1.20	33.01	26.57	77	-1.21	33.02		75	-1.20	33.01	26.57
98	-0.37	33.28		100	-0.20	33.31	26.77	98	-0.37	33.28		100	-0.20	33.31	26.77

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5161; May 30; latitude 47°34' N., longitude 50°24' W.; depth 119 meters; dynamic height 971.077						
0	3.18	32.25	0	3.18	32.25	25.70
25	2.98	32.30	25	2.98	32.30	25.75
50	-0.15	32.62	50	-0.15	32.62	26.22
74	-0.79	32.92	75	-0.70	32.93	26.49
99	-0.35	33.24	100	-0.30	33.25	26.72
Station 5162; May 30; latitude 47°24.5' N., longitude 50°00' W.; depth 71 meters; dynamic height 971.082						
0	3.49	32.35	0	3.49	32.35	25.74
20	3.38	32.40	25	3.20	32.42	25.83
45	1.78	32.55	50	0.80	32.63	26.18
60	-0.80	32.83				
Station 5163; May 30; latitude 47°43' N., longitude 49°53' W.; depth 115 meters; dynamic height 971.072						
0	3.09	32.36	0	3.09	32.36	25.79
25	2.90	32.39	25	2.90	32.39	25.84
51	-0.46	32.69	50	-0.45	32.68	26.28
76	-0.65	32.95	75	-0.65	32.94	26.50
102	-0.48	33.09	100	-0.50	33.08	26.60
Station 5164; May 30; latitude 47°58' N., longitude 49°47' W.; depth 169 meters; dynamic height 971.044						
0	2.86	32.27	0	2.86	32.27	25.74
26	2.62	32.34	25	2.65	32.34	25.82
51	-1.16	33.11	50	-1.15	33.10	26.64
77	-1.09	33.30	75	-1.10	33.29	26.78
103	-0.61	33.49	100	-0.65	33.47	26.93
154	0.48	33.81	150	0.40	33.79	27.13
Station 5165; May 30; latitude 48°14.5' N., longitude 49°42' W.; depth 220 meters; dynamic height 971.040						
0	2.64	32.43	0	2.64	32.43	25.89
25	2.26	32.53	25	2.26	32.53	26.00
50	-1.48	33.14	50	-1.48	33.14	26.68
75	-1.59	33.24	75	-1.59	33.24	26.76
100	-1.32	33.34	100	-1.32	33.35	26.84
151	0.54	33.80	150	0.50	33.79	27.12
201	2.13	34.48	200	2.10	34.47	27.56
Station 5166; May 30; latitude 48°33' N., longitude 49°34' W.; depth 622 meters; dynamic height 971.013						
0	2.75	32.74	0	2.75	32.74	26.13
25	2.59	32.77	25	2.59	32.77	26.16
49	-0.68	33.23	50	-0.70	33.24	26.74
74	-0.93	33.42	75	-0.95	33.43	26.90
98	-0.57	33.60	100	-0.55	33.61	27.03
147	0.39	33.97	150	0.40	33.98	27.28
196	0.71	34.09	200	0.75	34.10	27.36
294	2.22	34.50	300	2.25	34.51	27.58
388	2.75	34.66	400	2.80	34.67	27.66
594	3.42	34.81	600	3.40	34.81	27.72
Station 5167; May 30; latitude 48°40' N., longitude 49°31' W.; depth 1,060 meters; dynamic height 970.984						
0	2.34	32.72	0	2.34	32.72	26.14
25	2.16	32.80	25	2.16	32.80	26.23
49	-1.14	33.23	50	-1.15	33.23	26.74
74	-1.02	33.44	75	-1.00	33.45	26.92
99	-0.20	33.66	100	-0.10	33.67	27.06
147	0.87	34.13	150	0.90	34.14	27.38
196	1.50	34.30	200	1.55	34.31	27.47
295	2.50	34.61	300	2.55	34.62	27.65
391	3.10	34.75	400	3.20	34.76	27.70
590	3.54	34.84	600	3.50	34.84	27.73
792	3.50	34.85	800	3.50	34.85	27.74
997	3.36	34.86	1,000	3.35	34.86	27.76
Station 5168; May 30; latitude 49°07' N., longitude 49°16' W.; depth 1,628 meters; dynamic height 970.938						
0	2.95	32.84	0	2.95	32.84	26.19
26	2.92	33.02	25	2.95	33.00	26.32
52	-0.05	33.80	50	-0.05	33.76	27.13
78	0.89	34.06	75	0.75	34.04	27.31
104	1.36	34.21	100	1.30	34.18	27.38
156	1.96	34.44	150	1.90	34.42	27.54
208	2.16	34.50	200	2.15	34.49	27.57
312	2.58	34.60	300	2.50	34.58	27.61
405	2.98	34.71	400	3.00	34.70	27.67
610	3.34	34.84	600	3.30	34.84	27.75
818	3.43		800	3.45	34.86	27.75
1,024	3.52		1,000	3.50	34.87	27.76
1,538	3.34	34.89				
Station 5169; May 30-31; latitude 49°34' N., longitude 49°08' W.; depth, 1,719 meters; dynamic height 970.924						
0	2.51	32.90	0	2.51	32.90	26.27
20	2.11	33.09	25	1.65	33.23	26.60
40	0.35	33.76	50	0.25	33.86	27.20
60	0.25	33.94	75	0.55	34.04	27.32
80	0.70	34.07	100	1.25	34.18	27.39
121	1.76	34.30	150	2.35	34.42	27.50
161	2.51	34.47	200	2.70	34.55	27.57
241	2.84	34.63	300	3.00	34.70	27.67
370	3.09	34.77	400	3.15	34.78	27.71
560	3.26	34.82	600	3.25	34.82	27.74
755	3.35	34.84	800	3.35	34.84	27.74
950	3.35	34.85	1,000	3.35	34.85	27.75
1,450	3.29	34.88				
Station 5170; May 31; latitude 50°01' N., longitude 48°40' W.; depth 2,103 meters; dynamic height 970.864						
0	3.71	33.44	0	3.71	33.44	26.60
25	2.47	33.88	25	2.47	33.88	27.05
49	3.02	34.40	50	3.05	34.41	27.43
74	4.07	34.66	75	4.05	34.66	27.53
98	2.99	34.62	100	3.00	34.62	27.61
147	3.21	34.73	150	3.20	34.73	27.67
196	3.32	34.78	200	3.35	34.78	27.69
294	3.33	34.81	300	3.40	34.81	27.72
307	3.43	34.81	400	3.35	34.83	27.73
481	3.35	34.84	600	3.35	34.85	27.75
669	3.33	34.85	800	3.25	34.84	27.75
857	3.26	34.84	1,000	3.30	34.85	27.76
1,362	3.35	34.87				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5171; June 6; latitude 46°46' N., longitude 48°43' W.; depth 89 meters; dynamic height 971.046													
0	4.27	32.59	0	4.27	32.59	25.87	0	4.32	33.21	0	4.32	33.21	26.36
26	3.57	32.59	25	3.60	32.59	25.94	25	4.21	33.37	25	4.21	33.37	26.49
51	3.24	32.60	50	3.25	32.59	25.97	49	4.29	33.66	50	4.30	33.68	26.73
77	-0.25	32.96	75	0.05	32.93	26.46	74	3.23	34.16	75	3.20	34.16	27.22
Station 5172; June 6; latitude 46°50' N., longitude 48°30' W.; depth 117 meters; dynamic height 971.042													
0	3.78	32.50	0	3.78	32.50	25.84	98	2.83	34.44	100	2.80	34.44	27.47
25	3.09	32.50	25	3.09	32.50	25.90	147	2.48	34.58	150	2.50	34.58	27.61
49	2.26	32.64	50	2.25	32.65	26.10	196	2.87	34.66	200	2.90	34.67	27.66
74	-1.08	33.01	75	-1.10	33.02	26.57	294	3.61	34.80	300	3.65	34.81	27.69
98	-0.55	33.24	100	-0.50	33.25	26.74	344	3.65	34.84	400	3.65	34.85	27.72
Station 5173; June 6; latitude 46°51' N., longitude 47°38' W.; depth 183 meters; dynamic height 971.028													
0	3.37	32.53	0	3.37	32.53	25.91	523	3.63	34.86	600	3.55	34.86	27.74
25	2.66	32.55	25	2.66	32.55	25.98	707	3.44	34.86	800	3.40	34.86	27.76
51	-0.36	32.92	50	-0.30	32.91	26.45	891	3.41	34.86	1,000	3.35	34.87	27.77
76	-1.18	33.22	75	-1.20	33.21	26.73	1,030	3.34	34.88				
101	-0.75	33.39	100	-0.80	33.38	26.85	Station 5177; June 7; latitude 46°48' N., longitude 46°31' W.; depth 604 meters; dynamic height 970.900						
152	0.59	33.87	150	0.55	33.86	27.18	0	5.07	33.53	0	5.07	33.53	26.52
Station 5174; June 6; latitude 46°51' N., longitude 47°20' W.; depth 344 meters; dynamic height 971.009													
0	2.66	32.69	0	2.66	32.69	26.09	23	4.92	33.54	25	4.90	33.54	26.55
25	2.27	32.72	25	2.27	32.72	26.15	47	3.00	33.74	50	3.00	33.79	26.94
50	0.80	32.99	50	0.80	32.99	26.47	70	2.98	34.35	75	2.95	34.36	27.40
75	-0.27	33.55	75	-0.27	33.55	26.97	93	2.58	34.39	100	2.60	34.42	27.48
100	0.19	33.77	100	0.19	33.77	27.13	140	3.09	34.55	150	3.10	34.57	27.56
150	0.96	34.07	150	0.96	34.07	27.32	186	3.09	34.63	200	3.15	34.65	27.61
201	1.52	34.29	200	1.50	34.28	27.45	279	3.60	34.81	300	3.65	34.82	27.70
301	2.01	34.43	300	2.00	34.43	27.53	332	3.67	34.84	400	3.60	34.86	27.74
Station 5175; June 6; latitude 46°50.5' N., longitude 47°12' W.; depth 695 meters; dynamic height 970.995													
0	2.58	32.72	0	2.58	32.72	26.12	524	3.50	34.87	(600)	3.45	34.87	27.76
25	2.14	32.72	25	2.14	32.72	26.16	Station 5178; June 7; latitude 46°47' N., longitude 46°08' W.; depth 300 meters; dynamic height 970.922						
50	1.37	32.89	50	1.37	32.89	26.34	0	6.29	33.84	0	6.29	33.84	26.62
75	0.39	33.55	75	0.39	33.55	26.94	21	6.28	33.86	25	6.25	33.87	26.66
101	0.75	33.80	100	0.70	33.79	27.11	42	4.95	33.89	50	4.70	33.93	26.88
151	1.39	34.22	150	1.40	34.21	27.41	63	4.31	34.04	75	3.70	34.10	27.12
201	2.03	34.42	200	2.00	34.41	27.52	83	3.38	34.14	100	3.00	34.21	27.28
302	2.56	34.62	300	2.55	34.61	27.64	125	2.67	34.32	150	3.25	34.49	27.47
426	3.17	34.76	400	3.10	34.74	27.69	167	3.71	34.58	200	3.75	34.64	27.54
643	3.46	34.81	600	3.45	34.80	27.70	250	3.74	34.72	(300)	3.70	34.80	27.68
Station 5179; June 7; latitude 46°46' N., longitude 45°42' W.; depth 260 meters; dynamic height 970.939													
0	6.78	33.72	0	6.78	33.72	26.46							
20	6.67	33.73	25	6.50	33.73	26.50							
40	5.72	33.76	50	4.55	33.84	26.82							
60	3.26	33.94	75	2.90	34.61	27.13							
80	2.82	34.03	100	2.55	34.08	27.21							
121	2.36	34.15	150	3.05	34.36	27.39							
161	3.29	34.42	200	3.20	34.53	27.51							
201	3.18	34.53											

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5180; June 7; latitude 46°46' N., longitude 45°24' W.; depth 220 meters; dynamic height 970.967

0	7.11	33.60	0	7.11	33.60	26.33
25	7.02	33.60	25	7.02	33.60	26.33
49	6.08	33.67	50	6.00	33.68	26.53
74	3.68	33.87	75	3.65	33.88	26.94
98	2.99	33.97	100	2.95	33.98	27.09
148	2.84	34.24	150	2.85	34.25	27.32
197	3.57	34.48	200	3.55	34.49	27.44

Station 5181; June 7; latitude 46°46.5' N., longitude 45°05' W.; depth 169 meters; dynamic height 970.960

0	7.26	33.64	0	7.26	33.64	26.34
28	7.11	33.65	25	7.10	33.65	26.36
55	4.96	33.78	50	5.35	33.75	26.67
82	3.10	33.94	75	3.40	33.90	26.99
109	2.78	34.09	100	2.85	34.04	27.15
165	3.08	34.31	150	2.95	34.26	27.32

Station 5182; June 7; latitude 46°46' N., longitude 44°51' W.; depth 141 meters; dynamic height 970.946

0	7.29	33.64	0	7.29	33.64	26.33
25	7.17	33.64	25	7.17	33.64	26.35
50	4.06	33.84	50	4.06	33.84	26.87
76	2.96	34.06	75	2.95	34.05	27.15
101	2.94	34.23	100	2.95	34.23	27.29
131	2.93	34.25				

Station 5183; June 7; latitude 46°40' N., longitude 44°51' W.; depth 170 meters; dynamic height 970.933

0	7.52	33.62	0	7.52	33.62	26.29
26	5.94	33.74	25	6.05	33.73	26.56
52	3.13	33.95	50	3.20	33.94	27.04
78	2.93	34.07	75	2.95	34.05	27.15
104	3.07	34.28	100	3.05	34.26	27.31
155	3.74	34.49	150	3.65	34.47	27.42

Station 5184; June 7; latitude 46°34' N., longitude 44°52' W.; depth 220 meters; dynamic height 970.956

0	7.56	33.64	0	7.56	33.64	26.29
24	7.31	33.65	25	7.25	33.65	26.35
47	5.47	33.73	50	5.20	33.74	26.68
71	3.22	33.90	75	3.15	33.93	27.03
94	2.94	34.05	100	2.95	34.08	27.17
141	2.97	34.28	150	3.05	34.33	27.36
188	3.95	34.60	(200)	4.00	34.69	27.56

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5185; June 7; latitude 46°27' N., longitude 44°52' W.; depth 677 meters; dynamic height 970.916

0	7.34	33.64	0	7.34	33.64	26.32
25	7.06	33.66	25	7.06	33.66	26.38
49	3.79	34.17	50	3.70	34.17	27.18
74	3.00	34.28	75	3.00	34.28	27.33
98	3.06	34.36	100	3.05	34.36	27.39
147	2.85	34.52	150	2.85	34.53	27.54
197	3.45	34.68	200	3.50	34.68	27.60
295	3.58	34.81	300	3.60	34.81	27.70
368	3.55	34.83	400	3.55	34.84	27.72
568	3.48	34.86	(600)	3.45	34.86	27.75

Station 5186; June 7; latitude 46°19.5' N., longitude 44°54' W.; depth 2,103 meters; dynamic height 970.907

0	7.45	33.70	0	7.45	33.70	26.36
26	6.92	33.73	25	6.95	33.73	26.45
53	4.39	34.10	50	4.60	34.05	26.99
79	3.37	34.23	75	3.50	34.20	27.22
105	2.93	34.50	100	2.95	34.46	27.48
157	3.27	34.67	150	3.20	34.65	27.61
209	3.44	34.76	200	3.45	34.74	27.65
314	3.52	34.85	300	3.55	34.84	27.72
426	*3.60	34.86	400	3.60	34.86	27.74
641	3.51	34.875	600	3.50	34.87	27.76
858	3.47	34.89	800	3.50	34.88	27.76
1,068	3.39	34.89	1,000	3.45	34.89	27.77
1,590	3.36	34.89				

Station 5187; June 7; latitude 46°01' N., longitude 44°37' W.; depth 3,292 meters; dynamic height 970.973

0	6.81	33.30	0	6.81	33.30	26.13
25	6.65	33.33	25	6.65	33.33	26.17
50	6.03	33.38	50	6.03	33.38	26.28
75	1.86	33.83	75	1.86	33.83	27.06
99	2.37	34.10	100	2.40	34.12	27.26
149	3.71	34.51	150	3.70	34.51	27.45
199	3.75	34.65	200	3.75	34.65	27.55
298	4.17	34.85	300	4.20	34.85	27.67
344	3.70	34.825	400	3.65	34.84	27.71
517	3.59	34.86	600	3.55	34.86	27.74
689	3.51	-----	(800)	3.50	34.87	27.76
			(1,000)	3.45	34.88	27.76

Station 5188; June 8; latitude 46°05' N., longitude 45°23' W.; depth 2,561 meters; dynamic height 970.921

0	7.07	33.81	0	7.07	33.81	26.49
25	6.90	33.80	25	6.90	33.80	26.51
49	4.26	34.08	50	4.25	34.08	27.05
74	2.56	34.17	75	2.55	34.18	27.29
98	3.41	34.46	100	3.45	34.47	27.44
147	3.94	34.70	150	3.95	34.70	27.57
196	3.85	34.77	200	3.85	34.77	27.64
294	3.94	34.84	300	3.95	34.84	27.68
377	4.09	34.90	400	4.10	34.90	27.72
568	3.89	34.90	600	3.85	34.90	27.74
760	*3.74	34.89	800	3.70	34.89	27.75
954	3.56	34.88	1,000	3.55	34.88	27.75
1,446	3.38	34.86				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5189; June 8; latitude 46°07.5' N., longitude 46°08' W.; depth 1,719 meters; dynamic height 970.902							
0	7.36	33.72		0	7.36	33.72	26.39
24	6.88	33.73		25	6.80	33.73	26.47
42	3.78	34.10		50	3.75	34.11	27.13
78	3.10	34.33		75	3.10	34.34	27.37
96	3.32	34.47		100	3.30	34.48	27.46
144	3.20	34.62		150	3.25	34.64	27.59
192	3.80	34.78		200	3.85	34.80	27.66
288	3.97	34.89		300	3.90	34.88	27.72
323	3.77	34.865		400	3.70	34.87	27.74
494	3.62	34.875		600	3.55	34.88	27.75
672	3.55	34.89		800	3.50	34.88	27.76
852	3.49	34.88		1,000	3.45	34.88	27.76
1,325	3.35	34.88					
Station 5190; June 8; latitude 46°10.5' N., longitude 46°41' W.; depth 1,097 meters; dynamic height 970.898							
0	5.21	33.30		0	5.21	33.30	26.32
24	4.57	33.38		25	4.50	33.39	26.47
49	2.12	34.04		50	2.05	34.06	27.24
73	1.65	34.26		75	1.65	34.27	27.44
97	2.04	34.37		100	2.05	34.38	27.49
145	2.65	34.56		150	2.70	34.57	27.59
194	3.32	34.72		200	3.35	34.73	27.65
291	3.58	34.83		300	3.60	34.84	27.72
362	3.99	34.91		400	3.95	34.91	27.74
551	3.67	34.88		600	3.55	34.88	27.75
740	3.47	34.87		800	3.45	34.88	27.76
934	3.42	34.89		(1,000)	3.40	34.89	27.78
Station 5191; June 8; latitude 46°14' N., longitude 47°10' W.; depth 1,051 meters; dynamic height 970.908							
0	3.91	33.18		0	3.91	33.18	26.37
26	3.40	33.31		25	3.40	33.31	26.52
51	3.56	33.60		50	3.55	33.57	26.72
77	2.49	34.43		75	2.50	34.35	27.43
102	2.67	34.49		100	2.65	34.48	27.62
155	2.43	34.58		150	2.45	34.57	27.61
206	2.72	34.66		200	2.70	34.65	27.65
308	3.40	34.82		300	3.35	34.81	27.72
394	3.52	34.84		400	3.55	34.84	27.72
596	3.56	34.88		600	3.55	34.88	27.75
803	3.48	34.88		800	3.50	34.88	27.76
1,000	3.50	34.89		1,000	3.50	34.89	27.77
Station 5192; June 8; latitude 46°16' N., longitude 47°17' W.; depth 595 meters; dynamic height 970.938							
0	2.89	32.90		0	2.89	32.90	26.24
24	1.70	32.95		25	1.65	32.95	26.38
49	0.64	33.39		50	0.65	33.10	26.56
73	0.61	33.83		75	0.65	33.89	27.19
98	1.22	34.17		100	1.25	34.18	27.39
147	1.82	34.39		150	1.85	34.40	27.52
195	2.27	34.54		200	2.30	34.55	27.61
293	2.72	34.67		300	2.75	34.68	27.67
374	3.27	34.80		400	3.30	34.81	27.73
577	3.44	34.85					
Station 5193; June 8; latitude 46°15.5' N., longitude 47°40' W.; depth 172 meters; dynamic height 971.010							
0	2.81	32.68		0	2.81	32.68	26.07
26	1.97	32.76		25	2.00	32.76	26.20
52	0.55	32.98		50	0.60	32.97	26.46
78	-0.45	33.24		75	-0.40	33.22	26.71
103	-0.30	33.56		100	-0.35	33.53	26.95
156	0.50	33.84		150	0.45	33.81	27.14
Station 5194; June 8; latitude 46° 14' N., longitude 47°57' W.; depth 117 meters; dynamic height 971.020							
0	3.20	32.50		0	3.20	32.50	25.89
25	2.86	32.56		25	2.86	32.56	25.97
48	0.82	32.76		50	0.65	32.79	26.32
73	-1.26	33.21		75	-1.25	33.24	26.75
97	-0.43	33.41		100	-0.35	33.43	26.87
Station 5195; June 8; latitude 46°16' N., longitude 48°28' W.; depth 91 meters; dynamic height 971.032							
0	4.44	32.59		0	4.44	32.59	25.85
22	4.44	32.60		25	4.40	32.60	25.87
45	3.49	32.61		50	2.30	32.62	26.07
67	-0.47	32.93		(75)	-0.95	33.09	26.62
Station 5196; June 9; latitude 46°18' N., longitude 48°56' W.; depth 68 meters; dynamic height 971.033							
0	4.25	32.59		0	4.25	32.59	25.87
15	4.24	32.59		25	4.20	32.59	25.88
41	3.99	32.61		50	2.65	32.70	26.10
56	0.63	32.80					
Station 5197; June 9; latitude 46°10' N., longitude 48°42' W.; depth 82 meters; dynamic height 971.034							
0	4.52	32.58		0	4.52	32.58	25.84
23	4.51	32.58		25	4.50	32.58	25.84
47	3.84	32.60		50	3.00	32.63	26.02
61	-0.56	32.92		(75)	-1.00	33.15	26.68
Station 5198; June 9; latitude 46°02' N., longitude 48°27' W.; depth 89 meters; dynamic height 971.034							
0	3.42	32.53		0	3.42	32.53	25.90
25	3.40	32.53		25	3.40	32.53	25.90
49	2.44	32.62		50	2.30	32.63	26.08
74	-0.67	32.97		75	-0.75	32.98	26.53

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5199; June 9; latitude 45°49' N., longitude 48°12' W.; depth 115 meters; dynamic height 971.015							
0	3.00	32.52		0	3.00	32.52	25.93
23	2.97	32.53		25	2.95	32.54	25.95
46	0.42	32.91		50	0.15	32.98	26.49
69	-0.55	33.24		75	-0.55	33.34	26.81
92	0.03	33.65		100	0.25	33.82	27.17
Station 5200; June 9; latitude 45°47' N., longitude 48°12' W.; depth 179 meters; dynamic height 971.019							
0	2.79	32.61		0	2.79	32.61	26.02
23	2.57	32.67		25	2.50	32.68	26.10
46	1.03	33.02		50	0.80	33.08	26.54
69	0.07	33.34		75	0.05	33.41	26.85
93	0.11	33.63		100	0.15	33.68	27.05
139	0.65	33.90		(150)	0.80	33.96	27.24
Station 5201; June 9; latitude 45°43' N., longitude 48°10' W.; depth 685 meters; dynamic height 970.985							
0	2.60	32.74		0	2.60	32.74	26.14
26	2.44	32.78		25	2.45	32.78	26.18
51	1.11	33.26		50	1.15	33.24	26.65
77	0.66	33.60		75	0.65	33.57	26.94
102	0.91	34.03		100	0.90	34.01	27.28
152	1.42	34.24		150	1.40	34.23	27.42
203	1.72	34.35		200	1.70	34.34	27.48
305	2.10	34.47		300	2.10	34.46	27.55
350	2.48	34.60		400	2.80	34.67	27.66
539	3.26	34.78		(600)	3.30	34.81	27.73
Station 5202; June 9; latitude 45°31.5' N., longitude 47°56' W.; depth 1,335 meters; dynamic height 970.910							
0	3.89	33.08		0	3.89	33.08	26.29
27	3.52	33.16		25	3.55	33.15	26.38
53	1.97	34.13		50	2.15	34.00	27.18
80	1.59	34.30		75	1.60	34.28	27.44
105	1.89	34.40		100	1.80	34.38	27.51
159	2.25	34.52		150	2.20	34.50	27.58
212	2.72	34.65		200	2.60	34.62	27.64
317	3.36	34.80		300	3.25	34.78	27.70
387	3.87	34.88		400	3.85	34.88	27.72
585	3.56	34.86		600	3.55	34.86	27.74
788	3.53	34.89		800	3.55	34.89	27.76
990	3.49	34.89		1,000	3.50	34.89	27.77
1,293	3.39	34.88					
Station 5203; June 9; latitude 45°12.5' N., longitude 47°33' W.; depth 2,944 meters; dynamic height 970.985							
0	6.20	33.30		0	6.20	33.30	26.20
25	5.99	33.30		25	5.99	33.30	26.23
49	4.70	33.50		50	4.65	33.52	26.57
74	2.57	33.87		75	2.55	33.88	27.05
99	2.88	34.10		100	2.90	34.10	27.20
147	3.16	34.33		150	3.20	34.35	27.37
196	3.63	34.58		200	3.65	34.60	27.52
295	4.82	34.90		300	4.85	34.90	27.63
368	4.71	34.93		400	4.60	34.93	27.68
563	4.14	34.93		600	4.05	34.93	27.74
764	3.87	34.92		800	3.80	34.91	27.76
960	3.67	34.90		1,000	3.70	34.90	27.76
1,459	3.53	34.92					
Station 5204; June 9; latitude 45°19' N., longitude 46°44' W.; depth 3,292 meters; dynamic height 970.935							
0	7.13	33.62		0	7.13	33.62	26.34
25	7.12	33.62		25	7.12	33.62	26.34
51	5.37	33.89		50	5.55	33.88	26.74
76	3.54	34.32		75	3.55	34.31	27.30
101	3.44	34.46		100	3.45	34.45	27.42
151	3.85	34.68		150	3.85	34.68	27.56
202	4.13	34.79		200	4.10	34.78	27.62
303	3.85	34.82		300	3.85	34.82	27.68
394	3.86	34.87		400	3.85	34.87	27.72
597	3.66	34.87		600	3.65	34.87	27.74
802	3.57	34.88		800	3.55	34.88	27.75
1,002	3.49	34.88		1,000	3.55	34.88	27.75
1,502	3.37	34.87					
Station 5205; June 10; latitude 45°21' N., longitude 45°54' W.; depth 3,438 meters; dynamic height 970.949							
0	6.07	33.36		0	6.07	33.36	26.27
23	6.00	33.36		25	6.00	33.36	26.28
45	5.04	33.73		50	4.75	33.83	26.79
68	3.48	34.15		75	3.35	34.22	27.25
90	3.29	34.32		100	3.30	34.36	27.37
135	3.35	34.49		150	3.55	34.56	27.50
180	4.00	34.70		200	4.10	34.74	27.59
270	4.20	34.85		300	4.20	34.86	27.68
292	4.21	34.86		400	4.05	34.87	27.70
451	3.96	34.87		600	3.80	34.88	27.73
620	3.80	34.88		800	3.60	34.88	27.75
796	3.56	34.88		1,000	3.50	34.88	27.76
1,274	3.42	34.88					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5206; June 10; latitude 45°25' N., longitude 45°19' W.; depth 4,207 meters; dynamic height 971.092								Station 5209; June 10; latitude 44°24' N., longitude 45°58' W.; depth 3,841 meters; dynamic height 971.209							
0	6.90	33.25		0	6.90	33.25	26.08	0	12.44	34.28		0	12.44	34.28	25.96
27	10.50	34.39		25	10.25	34.33	26.40	24	12.53	34.44		25	12.55	34.48	26.09
53	11.55	34.84		50	11.45	34.81	26.57	48	14.54	35.67		50	14.55	35.66	26.59
79	11.72	35.03		75	11.70	35.01	26.68	72	13.37	35.53		75	13.35	35.53	26.75
105	11.32	35.10		100	11.45	35.09	26.78	95	13.24	35.56		100	13.20	35.56	26.80
159	8.92			150	9.35	34.93	27.02	144	12.63	35.48		150	12.55	35.46	26.86
211	7.11	34.79		200	7.45	34.80	27.22	191	11.99	35.36		200	11.90	35.34	26.89
316	5.69	34.80		300	5.90	34.80	27.43	286	10.40	35.27		300	9.85	35.18	27.13
422	4.62	34.84		400	4.80	34.83	27.58	325	*9.00	35.08		400	7.25	35.03	27.42
631	4.41	34.94		600	4.45	34.93	27.70	497	5.57	34.90		600	4.90	34.93	27.65
840	3.84	34.90		800	3.90	34.91	27.75	676	4.59	34.94		800	4.30	34.93	27.71
1,048	3.65	34.90		1,000	3.70	34.90	27.76	863	4.14	34.93		1,000	4.00	34.92	27.75
1,563	3.40	34.88						1,360	3.60	34.88					
Station 5207; June 10; latitude 44°50' N., longitude 45°16' W.; depth 4,134 meters; dynamic height 971.083								Station 5210; June 10-11; latitude 44°26' N., longitude 46°24' W.; depth 3,749 meters; dynamic height 971.171							
0	4.17	32.73		0	4.17	32.73	25.99	0	11.79	34.10		0	11.79	34.10	25.95
26	10.56	34.34		25	10.40	34.25	26.32	25	12.92	34.70		25	12.92	34.70	26.20
51	11.72	34.73		50	11.70	34.72	26.45	50	14.83	35.76		50	14.83	35.76	26.61
78	11.98	35.25		75	12.00	35.23	26.79	76	14.25	35.75		75	14.25	35.75	26.73
103	10.95	35.15		100	11.20	35.16	26.88	100	13.64	35.67		100	13.60	35.67	26.81
155	6.59	34.54		150	6.70	34.60	27.16	151	12.80	35.57		150	12.80	35.57	26.90
206	7.26	34.87		200	7.25	34.83	27.27	201	11.13	35.33		200	11.15	35.33	27.02
309	6.84	35.02		300	6.85	35.00	27.46	301	8.33	34.98		300	8.35	34.98	27.22
341	6.95	35.10		400	6.20	35.04	27.58	322	7.43	34.94		400	5.55	34.81	27.48
519	4.75	34.92		600	4.40	34.92	27.70	491	4.21	34.72		600	4.45	34.85	27.64
703	4.18	34.92		800	4.05	34.92	27.74	666	4.53	34.92		800	4.20	34.92	27.73
893	3.99	34.92		1,000	3.90	34.92	27.76	844	4.11	34.92		1,000	3.90	34.91	27.75
1,393	3.60	34.90						1,306	3.55	34.885					
Station 5208; June 10; latitude 44°24.5' N., longitude 45°15' W.; depth 3,942 meters; dynamic height 971.150								Station 5211; June 11; latitude 44°31' N., longitude 46°50' W.; depth 3,603 meters; dynamic height 971.036							
0	14.17	35.04		0	14.17	35.04	26.21	0	3.95	32.77		0	3.95	32.77	23.04
25	13.96	35.04		25	13.96	35.04	26.25	23	2.68	32.71		25	2.60	32.71	26.11
50	12.51	35.17		50	12.51	35.17	26.65	46	0.61	33.03		50	0.30	33.09	26.57
75	12.94	35.49		75	12.94	35.49	26.80	69	-0.52	33.37		75	-0.55	33.44	26.89
100	12.54	35.45		100	12.54	35.45	26.85	91	-0.48	33.62		100	-0.05	33.73	27.10
150	11.68	35.34		150	11.68	35.34	26.93	138	3.21	34.19		150	2.85	34.17	27.26
200	11.55	35.47		200	11.55	35.47	27.05	184	1.47	34.11		200	1.65	34.16	27.35
300	*8.89	35.12		300	8.89	35.12	27.25	275	3.11	34.54		300	3.40	34.61	27.56
370	7.47	35.06		400	6.95	35.04	27.48	289	3.05	34.53		400	4.50	34.88	27.65
563	4.94	34.96		600	4.85	34.96	27.68	440	4.71	34.94		600	4.30	34.94	27.72
762	4.67	35.00		800	4.55	34.99	27.74	596	4.34	34.94		800	3.95	34.91	27.74
961	4.01	34.94		1,000	3.95	34.94	27.76	762	4.00	34.91		1,000	3.70	34.89	27.75
1,471	3.40	34.88						1,207	3.46	34.88					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5212; June 11; latitude 44°43.5' N., longitude 47°32' W.; depth 3,841 meters; dynamic height 970.974						
0	5.44	33.02	0	5.44	33.02	26.08
26	5.38	33.13	25	5.40	33.13	26.17
51	3.98	33.22	50	4.15	33.22	26.37
77	2.53	34.03	75	2.65	33.95	27.10
102	3.13	34.27	100	3.10	34.26	27.31
153	3.33	34.48	150	3.30	34.47	27.46
204	3.45	34.62	200	3.45	34.61	27.55
306	4.24	34.86	300	4.25	34.84	27.65
376	4.19	34.89	400	4.15	34.89	27.70
570	3.84	34.90	600	3.80	34.90	27.75
768	3.62	34.87	800	3.60	34.87	27.75
965	3.58	34.88	1,000	3.55	34.88	27.75
1,468	3.40	34.88				

Station 5213; June 11; latitude 44°49.5' N., longitude 48°11' W.; depth 2,834 meters; dynamic height 970.966

0	5.69	33.14	0	5.69	33.14	26.15
22	5.77	33.15	25	5.75	33.16	26.15
42	4.36	33.54	50	3.85	33.71	26.80
64	3.25	33.97	75	2.90	34.10	27.20
85	2.68	34.20	100	2.85	34.26	27.33
128	3.27		150	3.00	34.47	27.43
170	3.93	34.54	200	4.10	34.63	27.50
255	4.14	34.80	300	4.15	34.83	27.65
361	4.11	34.86	400	4.05	34.87	27.70
549	3.72	34.88	600	3.70	34.88	27.74
744	3.60	34.87	800	3.55	34.87	27.75
942	3.48	34.88	1,000	3.50	34.88	27.76
1,457	3.50	34.88				

Station 5214; June 11; latitude 44°56' N., longitude 48°34' W.; depth 1,939 meters; dynamic height 970.916

0	3.08	32.96	0	3.08	32.96	26.27
24	2.78	33.02	25	2.80	33.02	26.36
47	3.38	33.55	50	3.30	33.64	26.79
71	1.73	34.21	75	1.75	34.26	27.42
94	2.08	34.38	100	2.10	34.40	27.50
141	2.29	34.52	150	2.30	34.53	27.59
188	2.50	34.59	200	2.60	34.61	27.63
282	3.58	34.82	300	3.55	34.82	27.71
393	3.53	34.83	400	3.55	34.83	27.72
591	3.52	34.87	600	3.50	34.87	27.76
791	3.48		800	3.50	34.87	27.76
987	3.45		1,000	3.50	34.88	27.76
1,476	3.39	34.89				

Station 5215; June 11; latitude 44°58' N., longitude 48°53' W.; depth 869 meters; dynamic height 971.026

0	3.50	32.49	0	3.50	32.49	25.85
26	2.20	32.88	25	2.30	32.88	26.28
51	0.71	33.21	50	0.80	33.19	26.63
77	0.30	33.48	75	0.30	33.45	26.86
102	0.42	33.83	100	0.35	33.79	27.13
154	1.22	34.14	150	1.20	34.12	27.35
205	1.45	34.24	200	1.45	34.23	27.41
307	1.83	34.38	300	1.80	34.37	27.51
425	*2.56	34.61	400	2.35	34.56	27.61
637	3.38	34.81	600	3.30	34.78	27.70

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5216; June 11; latitude 45°00' N., longitude 49°10' W.; depth 70 meters; dynamic height 971.061						
0	4.53		0	4.53	32.49	25.75
25	2.10	32.72	25	2.10	32.72	26.16
50	-0.41	32.98	50	-0.41	32.98	26.52
60	-0.40	33.01				
75	-0.33	33.03				

Station 5217; June 12; latitude 45°03.5' N., longitude 49°30' W.; depth 66 meters; dynamic height 971.071

0	4.54	32.49	0	4.54	32.49	25.75
26	3.49	32.57	25	3.50	32.56	25.91
52	0.25	32.54	50	0.35	32.82	26.36

Station 5218; June 12; latitude 44°14' N., longitude 49°28' W.; depth 50 meters; dynamic height 971.088

0	6.79	31.94	0	6.79	31.94	25.06
28	3.91	32.62	25	4.25	32.55	25.84
44	3.47	32.66	(50)	3.40	32.67	26.01

Station 5219; June 12; latitude 44°06' N., longitude 49°12' W.; depth 100 meters; dynamic height 971.056

0	5.37	32.40	0	5.37	32.40	25.61
26	2.52	32.72	25	2.60	32.71	26.11
53	0.31	32.98	50	0.50	32.95	26.44
79	0.04	33.18	75	0.10	33.14	26.63

Station 5220; June 12; latitude 44°05' N., longitude 49°06' W.; depth 320 meters; dynamic height 971.046

0	4.10	32.44	0	4.10	32.44	25.77
25	1.81	32.76	25	1.81	32.76	26.21
50	0.13	33.03	50	0.13	33.03	26.53
75	-0.40	33.34	75	-0.40	33.34	26.81
100	-0.26	33.50	100	-0.26	33.50	26.93
151	0.42	33.83	150	0.40	33.83	27.16
201	0.97	34.03	200	0.95	34.02	27.28
251	1.18	34.13				

Station 5221; June 12; latitude 44°03' N., longitude 49°02' W.; depth 951 meters; dynamic height 971.038

0	3.46	32.43	0	3.46	32.43	25.82
25	2.22	32.73	25	2.22	32.73	26.16
50	0.27	33.01	50	0.27	33.01	26.52
75	-0.52	33.28	75	-0.52	33.28	26.76
100	-0.22	33.48	100	-0.22	33.48	26.91
150	0.56	33.90	150	0.56	33.90	27.21
200	1.20	34.12	200	1.20	34.12	27.35
300	2.93	34.59	300	2.93	34.59	27.58
401	2.79	34.64	400	2.80	34.64	27.63
596	3.38	34.81	600	3.40	34.81	27.72
			(800)	3.45	34.85	27.74

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5222; June 12; latitude 44°02' N., longitude 48°56' W.; depth 1,646 meters; dynamic height 971.023								Station 5226; June 13; latitude 43°27' N., longitude 46°44' W.; depth 4,298 meters; dynamic height 971.299							
0	3.73	32.25		0	3.73	32.25	25.64	0	14.32	34.13		0	14.32	34.13	25.46
25	2.91	32.68		25	2.91	32.68	26.07	25	15.23	35.11		25	15.23	35.11	26.02
50	1.78	32.80		50	1.78	32.80	26.25	49	15.55	35.46		50	15.55	35.47	26.22
75	0.73	33.21		75	0.73	33.21	26.65	74	14.95	35.68		75	14.90	35.68	26.53
100	0.36	33.68		100	0.36	33.68	27.04	98	14.55	35.79		100	14.50	35.79	26.70
150	2.11	34.24		150	2.11	34.24	27.57	147	13.63	35.66		150	13.60	35.65	26.79
200	2.11	34.37		200	2.11	34.37	27.48	197	12.80	35.55		200	12.80	35.54	26.87
300	2.35	34.54		300	2.35	34.54	27.59	295	10.95	35.35		300	10.95	35.35	27.08
394	2.92	34.70		400	2.95	34.71	27.68	315	10.68	35.33		400	8.85	35.14	27.27
593	3.48	34.83		600	3.45	34.83	27.72	500	6.84	34.96		600	5.75	34.95	27.56
793	3.51	34.85		800	3.50	34.85	27.74	688	5.13	34.95		800	4.60	34.93	27.68
990	3.51	34.86		1,000	3.50	34.86	27.75	868	4.36	34.92		1,000	4.15	34.92	27.73
1,479	3.44	34.86						1,337	3.76	34.93					
Station 5223; June 12; latitude 43°56' N., longitude 48°40' W.; depth 3,120 meters; dynamic height 971.022								Station 5227; June 13; latitude 43°17' N., longitude 46°06' W.; depth 4,663 meters; dynamic height 971.295							
0	9.38	32.91		0	9.38	32.91	25.44	0	14.46	34.76		0	14.46	34.76	25.93
24	8.31	33.18		25	8.10	33.20	25.88	25	12.91	34.78		25	12.91	34.78	26.26
49	3.16	33.63		50	3.20	33.65	26.81	50	12.89	34.91		50	12.89	34.91	26.37
73	6.58	34.42		75	6.70	34.45	27.05	74	12.52	34.98		75	12.50	34.98	26.50
98	7.48	34.73		100	7.50	34.74	27.16	99	12.85	35.27		100	12.85	35.28	26.66
147	6.93	34.86		150	6.85	34.85	27.34	149	12.80	35.47		150	12.80	35.47	26.82
195	4.85	34.62		200	4.90	34.62	27.41	198	12.15	35.38		200	12.15	35.37	26.87
293	6.14	35.03		300	6.20	35.05	27.59	403	8.29	34.92		300	10.45	35.14	27.00
374	6.38	35.16		400	6.15	35.13	27.65	620	5.02	34.87		400	8.40	34.92	27.17
561	4.12	34.93		600	4.05	34.92	27.74	841	4.67	34.98		600	5.15	34.87	27.58
748	3.88	34.91		800	3.85	34.90	27.74	1,044	4.18	34.93		800	4.75	34.96	27.69
933	3.70	34.90		1,000	3.70	34.90	27.76	1,553	3.61	34.91		1,000	4.25	34.94	27.73
1,391	3.53	34.91													
Station 5224; June 12; latitude 43°48' N., longitude 48°02' W.; depth 3,566 meters; dynamic height 971.003								Station 5228; June 13; latitude 43°06' N., longitude 45°25' W.; depth 4,609 meters; dynamic height 971.310							
0	6.87	33.00		0	6.87	33.00	25.89	0	15.52	35.04		0	15.52	35.04	25.90
25	4.82	33.08		25	4.82	33.08	26.20	25	15.42	35.42		25	15.42	35.42	26.22
49	3.51	33.24		50	3.45	33.25	26.46	50	15.44	35.62		50	15.44	35.62	26.37
74	1.80	33.62		75	1.75	33.63	26.91	74	15.03	35.75		75	15.00	35.75	26.56
99	1.48	33.90		100	1.50	33.91	27.16	99	14.13	35.68		100	14.10	35.68	26.71
148	2.04	34.26		150	2.05	34.26	27.40	149	13.48	35.64		150	13.50	35.64	26.80
197	1.90	34.38		200	1.95	34.39	27.51	198	13.18	35.62		200	13.20	35.62	26.85
296	3.63	34.73		300	3.65	34.74	27.63	297	10.62	35.18		300	10.55	35.17	27.01
381	4.50	34.91		400	4.50	34.91	27.68	406	8.28	34.90		400	8.40	34.90	27.15
576	3.99	34.88		600	3.95	34.88	27.71	615	5.61	34.91		600	5.75	34.91	27.54
775	3.69			800	3.70	34.88	27.74	810	4.92	34.98		800	4.95	34.98	27.68
968	3.57	34.88		1,000	3.55	34.88	27.75	1,016	4.33	34.95		1,000	4.35	34.95	27.73
1,450	3.39							1,537	3.63	34.91					
Station 5225; June 12-13; latitude 43°37' N., longitude 47°23' W.; depth 3,932 meters; dynamic height 971.161								Station 5229; June 13; latitude 42°45' N., longitude 45°47' W.; depth 4,572 meters; dynamic height 971.300							
0	10.26	32.98		0	10.26	32.98	25.36	0	16.30	34.87		0	16.30	34.87	25.59
25	11.69	34.16		25	11.69	34.16	26.02	25	16.50	35.28		25	16.50	35.28	25.87
50	11.84	35.18		50	11.84	35.18	26.78	50	15.76	35.41		50	15.76	35.41	26.14
74	13.12	35.53		75	13.10	35.53	26.80	74	15.51	35.50		75	15.50	35.50	26.26
99	12.47	35.40		100	12.40	35.40	26.84	99	14.73	35.59		100	14.70	35.59	26.51
149	11.42	35.26		150	11.40	35.26	26.93	149	13.66	35.58		150	13.65	35.58	26.73
198	9.82	35.10		200	9.80	35.10	27.08	198	12.77	35.54		200	12.75	35.54	26.88
297	6.40	34.73		300	6.75	34.78	27.30	297	11.29	35.44		300	11.20	35.43	27.09
302	7.03	34.83		(400)	5.50	34.81	27.49	381	8.87	35.14		400	8.45	35.13	27.32
				(600)	4.25	34.87	27.68	595	6.34	35.07		600	6.30	35.07	27.59
				(800)	3.95	34.87	27.71	800	4.88	34.97		800	4.90	34.97	27.69
				(1,000)	3.85	34.88	27.72	1,001	4.25	34.94		1,000	4.25	34.94	27.73
								1,504	3.60	34.90					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5230; June 13; latitude 42°23.5' N., longitude 46°09' W.; depth 4,755 meters; dynamic height 971.252

0	16.65	35.20	0	16.65	35.20	25.77
23	16.56	35.22	25	16.50	35.22	25.82
47	15.91	35.31	50	15.80	35.32	26.05
70	15.08	35.38	75	14.80	35.38	26.33
93	13.54	35.36	100	13.30	35.34	26.61
140	11.59	35.19	150	11.25	35.15	26.87
187	9.66	34.99	200	9.50	34.99	27.04
280	8.83	35.05	300	8.70	35.06	27.23
325	8.49	35.07	400	7.65	35.04	27.37
497	6.51	35.00	600	5.70	34.99	27.60
660	5.32	34.98	800	4.85	34.98	27.69
838	4.77	34.98	1,000	4.45	34.96	27.73
1,306	3.87	34.92				

Station 5231; June 14; latitude 42°37.5' N., longitude 46°48' W.; depth 3,932 meters; dynamic height 971.320

0	16.11	35.18	0	16.11	35.18	25.88
24	16.29	35.55	25	16.25	35.55	26.13
49	15.56	35.66	50	15.50	35.66	26.39
73	14.77	35.73	75	14.75	35.73	26.60
98	14.53	35.75	100	14.50	35.75	26.68
147	13.55	35.63	150	13.50	35.63	26.79
195	13.05	35.56	200	13.00	35.56	26.84
293	11.71	35.46	300	11.60	35.45	27.03
366	10.63	35.34	400	10.05	35.29	27.18
569	7.36	35.11	600	6.95	35.09	27.52
752	5.48	35.02	800	5.25	35.01	27.68
946	4.71	34.99	1,000	4.60	34.98	27.72
1,440	3.85	34.90				

Station 5232; June 14; latitude 42°50.5' N., longitude 47°22' W.; depth 3,658 meters; dynamic height 971.226

0	13.82	33.81	0	13.82	33.81	25.32
23	15.44	35.46	25	15.40	35.50	26.28
46	14.68	35.63	50	14.55	35.63	26.57
69	14.15	35.62	75	14.05	35.61	26.67
92	13.71	35.60	100	13.60	35.59	26.74
138	13.15	35.55	150	13.15	35.58	26.83
184	13.24	35.68	200	12.75	35.62	26.94
276	10.41	35.28	300	9.95	35.21	27.15
289	10.13	35.22	400	8.40	35.17	27.37
441	7.84	35.15	600	5.40	34.99	27.64
581	5.50	34.99	800	4.65	34.97	27.72
728	4.87	34.99	1,000	4.15	34.94	27.74
1,092	3.91	34.93				

Station 5233; June 14; latitude 43°05' N., longitude 47°58' W.; depth 3,566 meters; dynamic height 971.037

0	10.24	33.03	0	10.24	33.03	25.40
20	9.65	33.13	25	8.60	33.15	25.75
40	5.86	33.33	50	6.10	33.80	26.62
60	6.35	34.29	75	6.55	34.43	27.05
80	6.55	34.46	100	6.40	34.53	27.15
120	6.18	34.59	150	6.25	34.69	27.29
159	6.24	34.72	200	5.85	34.78	27.41
239	5.46	34.83	300	5.20	34.88	27.57
400	4.81	34.96	400	4.80	34.96	27.69
			(600)	5.20	35.05	27.71
			(800)	3.70	34.87	27.74
			(1,000)	3.55	34.87	27.75

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5234; June 14; latitude 43°14' N., longitude 48°23' W.; depth 3,109 meters; dynamic height 971.020

0	9.01	32.91	0	9.01	32.91	25.49
23	6.30	32.98	25	6.10	32.98	25.97
45	4.46	33.06	50	4.10	33.10	26.28
68	2.68	33.35	75	2.40	33.45	26.72
90	2.08	33.72	100	2.10	33.82	27.04
135	2.35	34.12	150	2.85	34.25	27.32
181	3.58	34.48	200	3.75	34.55	27.47
271	4.08	34.70	300	3.80	34.72	27.61
325	3.64	34.74	400	3.65	34.80	27.68
512	3.62	34.86	600	3.60	34.87	27.75
700	3.53	34.88	800	3.50	34.88	27.76
887	3.48	34.88	1,000	3.45	34.88	27.76
1,375	3.31	34.89				

Station 5235; June 14; latitude 42°35.5' N., longitude 48°44' W.; depth 2,433 meters; dynamic height 971.017

0	9.00	33.06	0	9.00	33.06	25.62
25	6.72	33.02	25	6.72	33.02	25.92
50	5.06	33.45	50	5.06	33.45	26.46
75	3.98	33.90	75	3.98	33.90	26.93
99	4.36	34.26	100	4.35	34.26	27.18
149	4.04	34.45	150	4.05	34.45	27.36
199	5.09	34.78	200	5.10	34.78	27.51
298	4.26	34.79	300	4.25	34.79	27.61
410	4.30	34.88	400	4.30	34.87	27.67
632	3.93	34.895	600	3.95	34.89	27.72
836	3.64	34.88	800	3.65	34.88	27.74
1,045	3.57	34.88	1,000	3.60	34.88	27.75
1,569	3.40	34.89				

Station 5236; June 15; latitude 42°14' N., longitude 48°10' W.; depth 3,402 meters; dynamic height 971.119

0	12.71	33.34	0	12.71	33.34	25.18
24	11.35	34.43	25	11.30	34.46	26.32
48	10.77	34.89	50	10.80	34.95	26.79
72	11.87	35.24	75	11.90	35.25	26.82
96	11.76	35.26	100	11.75	35.25	26.85
144	9.41	34.87	150	9.40	34.89	26.98
192	9.65	35.10	200	9.50	35.09	27.12
288	7.03	34.89	300	6.40	34.83	27.38
261	7.09	34.82	400	4.60	34.80	27.58
403	4.58	34.80	600	4.60	34.94	27.69
537	4.66	34.93	800	4.35	34.94	27.72
689	4.51	34.95	1,000	4.00	34.92	27.75
1,102	3.84	34.91				

Station 5237; June 15; latitude 41°54' N., longitude 47°35' W.; depth 3,658 meters; dynamic height 971.262

0	13.82	33.16	0	13.82	33.16	24.82
22	11.70	33.73	25	11.70	33.83	25.76
45	12.09	34.64	50	12.25	34.80	26.41
67	12.84	35.36	75	12.80	35.37	26.74
90	12.63	35.33	100	12.65	35.40	26.79
135	12.90	35.50	150	12.70	35.47	26.84
179	12.14	35.38	200	11.75	35.32	26.91
269	9.99	35.16	300	9.45	35.11	27.15
359	8.47	35.06	400	7.95	35.05	27.34
561	6.09	35.01	600	5.80	35.00	27.60
753	4.93	34.96	800	4.70	34.95	27.69
950	4.11	34.92	1,000	4.05	34.92	27.74
1,455	3.68	34.90				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, ° C.	Salinity, ‰	Depth, meters	Temperature, ° C.	Salinity, ‰	σ_t	Depth, meters	Temperature, ° C.	Salinity, ‰	Depth, meters	Temperature, ° C.	Salinity, ‰	σ_t
Station 5238; June 15; latitude 41°42' N., longitude 47°14' W.; depth 4,298 meters; dynamic height 971.332							Station 5242; June 16; latitude 41°15' N., longitude 49°58' W.; depth 3,036 meters; dynamic height 971.242						
0	15.46	33.74	0	15.46	33.74	24.82	0	19.66	35.35	0	19.66	35.35	25.13
24	14.79	34.91	25	14.75	34.92	25.99	25	17.29	35.50	25	17.29	35.50	25.85
48	14.40	35.28	50	14.40	35.35	26.39	48	16.20	35.58	50	16.15	35.59	26.18
71	15.20	35.80	75	15.10	35.80	26.58	73	15.32	35.76	75	15.20	35.76	26.53
95	14.10	35.62	100	14.05	35.63	26.68	97	14.18	35.65	100	14.10	35.64	26.68
143	14.05	35.72	150	13.90	35.70	26.76	146	13.22	35.55	150	13.20	35.55	26.80
191	13.13	35.56	200	13.00	35.55	26.84	195	13.11	35.65	200	13.00	35.65	26.91
286	12.01	35.50	300	11.75	35.47	27.02	292	10.13	35.40	300	10.00	35.37	27.26
392	9.88	35.26	400	9.75	35.25	27.20	362	8.83	35.14	400	8.15	35.10	27.35
605	7.02	35.14	600	7.10	35.14	27.53	507	6.24	35.00	600	4.90	34.92	27.65
803	4.48	34.89	800	4.50	34.89	27.66	624	4.67	34.91	800	4.15	34.91	27.72
1,008	4.31	34.95	1,000	4.30	34.95	27.73	773	4.18	34.91	1,000	3.85	34.90	27.74
1,521	3.67	34.91					1,160	3.65	34.90				
Station 5239; June 15; latitude 41°16.5' N., longitude 48°12' W.; depth 3,731 meters; dynamic height 971.012							Station 5243; June 16; latitude 41°27' N., longitude 50°11' W.; depth 3,566 meters; dynamic height 971.161						
0	14.09	32.92	0	14.09	32.92	24.57	0	14.12	33.28	0	14.12	33.28	24.84
25	4.33	33.40	25	4.33	33.40	26.60	27	11.91	34.42	25	11.95	34.32	26.09
51	5.10	34.07	50	5.00	34.04	26.93	53	11.84	34.93	50	11.85	34.89	26.55
76	7.32	34.62	75	7.25	34.60	27.09	80	11.64	35.13	75	11.70	35.12	26.76
101	8.00	34.88	100	8.00	34.88	27.20	106	11.07	35.05	100	11.20	35.06	26.81
152	6.29	34.76	150	6.35	34.76	27.34	160	11.33	35.27	150	11.30	35.23	26.92
203	4.81	34.69	200	4.85	34.69	27.47	212	9.19	35.02	200	9.55	35.07	27.10
304	6.10	35.04	300	6.10	35.03	27.58	318	7.66	35.01	300	8.00	35.01	27.30
424	5.41	35.02	400	5.55	35.02	27.65	500	4.46	34.86	400	6.25	34.95	27.50
649	4.58	35.00	600	4.75	35.00	27.72	713	4.59	34.96	600	4.50	34.91	27.68
855	4.04	34.93	800	4.15	34.95	27.75	908	4.13	34.95	800	4.35	34.96	27.74
1,066	3.51	34.87	1,000	3.60	34.88	27.75	1,112	3.93	34.95	1,000	4.00	34.94	27.76
1,586	3.60	34.94					1,621	3.67	34.94				
Station 5240; June 15; latitude 41°46' N., longitude 48°41' W.; depth 3,475 meters; dynamic height 971.085							Station 5244; June 16; latitude 42°06' N., longitude 50°04' W.; depth 3,109 meters; dynamic height 971.039						
0	14.30	32.81	0	14.30	32.81	24.45	0	11.83	32.75	0	11.83	32.75	24.90
23	8.80	33.18	25	8.60	33.19	25.78	24	3.41	32.94	25	3.15	32.95	26.26
47	7.15	33.25	50	6.60	33.27	26.13	49	1.20	33.18	50	1.20	33.21	26.63
70	3.32	33.51	75	3.60	33.61	26.75	73	5.38	34.14	75	5.40	34.14	26.97
93	5.45	34.14	100	5.35	34.20	27.02	97	4.65	34.12	100	4.60	34.13	27.05
140	4.79	34.42	150	4.60	34.41	27.27	146	4.09	34.32	150	4.05	34.33	27.27
186	3.89	34.38	200	4.00	34.45	27.37	195	3.50	34.38	200	3.50	34.39	27.37
279	5.29	34.86	300	5.70	34.96	27.58	292	3.90	34.68	300	4.00	34.70	27.57
347	6.61	35.15	400	6.10	35.09	27.63	387	5.10	34.98	400	5.10	34.98	27.66
538	4.67	34.95	600	4.35	34.93	27.71	598	4.52	34.94	600	4.50	34.94	27.70
719	4.08	34.92	800	4.15	34.93	27.73	795	4.11	34.95	800	4.10	34.95	27.76
909	4.18	34.96	1,000	4.05	34.95	27.76	996	3.80	34.91	1,000	3.80	34.91	27.76
1,401	3.47	34.88					1,504	3.44	34.90				
Station 5241; June 16; latitude 42°13.5' N., longitude 49°10' W.; depth 2,853 meters; dynamic height 971.025							Station 5245; June 16; latitude 42°34' N., longitude 49°58' W.; depth 1,920 meters; dynamic height 970.987						
0	10.08	32.66	0	10.08	32.66	25.13	0	10.51	33.06	0	10.51	33.06	25.37
23	2.60	32.90	25	2.50	32.92	26.29	24	5.93	33.10	25	5.70	33.10	26.11
46	1.56	33.30	50	1.70	33.39	26.73	48	3.03	33.34	50	2.90	33.36	26.61
70	3.47	33.86	75	3.60	33.95	27.01	72	2.11	33.73	75	2.10	33.75	26.98
93	4.32	34.26	100	4.70	34.36	27.22	96	2.01	34.03	100	2.00	34.06	27.24
139	7.47	34.96	150	7.20	34.93	27.35	144	2.39	34.33	150	2.50	34.35	27.43
185	6.13	34.82	200	5.75	34.79	27.44	192	3.22	34.54	200	3.20	34.55	27.53
278	4.39	34.74	300	4.60	34.79	27.57	288	3.10	34.66	300	3.10	34.67	27.64
352	5.09	34.94	400	4.95	34.95	27.66	394	3.53	34.80	400	3.55	34.81	27.70
544	4.58	34.96	600	4.40	34.94	27.71	607	3.83	34.89	600	3.80	34.89	27.74
722	4.07	34.91	800	3.95	34.89	27.72	804	3.66	34.89	800	3.65	34.89	27.75
913	3.74	34.88	1,000	3.65	34.88	27.74	1,011	3.59	34.88	1,000	3.60	34.88	27.75
1,410	3.45	34.88					1,533	3.41	34.86				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5246; June 17; latitude 42°54' N., longitude 49°54' W.; depth 448 meters; dynamic height 971.044						
0	8.32	32.50	0	8.32	32.50	25.28
25	3.64	33.01	25	3.64	33.01	26.26
50	0.74	33.50	50	0.74	33.50	26.88
75	3.85	34.13	75	3.85	34.13	27.13
100	7.64	34.74	100	7.64	34.74	27.14
150	6.18	34.66	150	6.18	34.66	27.28
199	6.36	34.76	200	6.35	34.76	27.34
299	4.22	34.63	300	4.20	34.63	27.49
Station 5247: June 17; latitude 43°05' N., longitude 49°52' W.; depth 75 meters; dynamic height 971.063						
0	9.38	32.44	0	9.38	32.44	25.07
26	5.39	33.04	25	5.40	32.99	26.06
51	7.48	34.32	50	7.45	34.20	26.74
77	5.31	34.17	75	5.50	34.18	26.98
Station 5248: June 17; latitude 43°30' N., longitude 49°47' W.; depth 55 meters; dynamic height 971.072						
0	9.01	32.42	0	9.01	32.42	25.12
26	3.80	32.67	25	4.10	32.66	25.94
47	1.57	33.07	50	1.45	33.12	26.53
Station 5249: July 11; latitude 50°00' N., longitude 48°55' W.; depth 1,920 meters; dynamic height 970.844						
0	7.29	33.91	0	7.29	33.91	26.55
25	4.74	33.92	25	4.74	33.92	26.87
50	3.18	34.34	50	3.18	34.34	27.36
75	2.85	34.60	75	2.85	34.60	27.60
100	3.02	34.69	100	3.02	34.69	27.66
150	3.25	34.80	150	3.25	34.80	27.72
199	3.45	34.84	200	3.45	34.84	27.73
299	3.41	34.86	300	3.40	34.86	27.76
405	3.42	34.86	400	3.40	34.86	27.76
624	3.32	34.86	600	3.30	34.86	27.77
828	3.28	34.87	800	3.30	34.87	27.78
1,038	3.24	34.88	1,000	3.25	34.88	27.78
1,567	3.32	34.90				
Station 5250: July 11; latitude 49°48' N., longitude 49°30' W.; depth 1,371 meters; dynamic height 970.876						
0	6.25	32.95	0	6.25	32.95	25.92
25	2.87	33.79	25	2.87	33.79	26.95
50	0.79	34.06	50	0.79	34.06	27.32
75	1.26	34.20	75	1.26	34.20	27.41
99	1.68	34.35	100	1.70	34.35	27.49
149	2.40	34.56	150	2.40	34.56	27.61
199	2.84	34.69	200	2.85	34.69	27.67
298	3.24	34.80	300	3.25	34.80	27.72
383	3.22	34.82	400	3.20	34.82	27.75
580	3.33	34.86	600	3.30	34.86	27.77
780	3.25	34.86	800	3.25	34.86	27.77
979	3.25	34.86	1,000	3.25	34.86	27.77
1,210	3.26	34.87				
Station 5251: July 11; latitude 49°41.5' N., longitude 49°59' W.; depth 659 meters; dynamic height 970.951						
0	5.83	32.76	0	5.83	32.76	25.83
23	3.89	32.86	25	3.65	32.92	26.19
46	1.36	33.54	50	1.10	33.58	26.91
68	-0.13	33.75	75	0.00	33.80	27.16
91	0.36	33.92	100	0.50	33.97	27.27
137	1.14	34.16	150	1.35	34.22	27.42
183	1.78	34.36	200	2.00	34.43	27.53
274	2.76	34.66	300	2.90	34.70	27.68
327	3.00	34.74	400	3.15	34.78	27.71
520	3.23	34.82	(600)	3.25	34.84	27.75
Station 5252: July 11-12; latitude 49°30.5' N., longitude 50°28' W.; depth 329 meters; dynamic height 970.989						
0	6.81	32.78	0	6.81	32.78	25.72
24	2.93	32.83	25	2.80	32.84	26.21
47	-1.24	33.24	50	-1.25	33.26	26.77
71	-1.09	33.41	75	-1.00	33.45	26.92
94	-0.50	33.63	100	-0.35	33.68	27.07
141	0.72	33.94	150	0.85	33.98	27.25
189	1.21	34.16	200	1.35	34.20	27.40
283	2.27	34.52	(300)	2.40	34.59	27.63
Station 5253: July 12; latitude 49°19.5' N., longitude 50°58' W.; depth 327 meters; dynamic height 971.018						
0	7.15	32.73	0	7.15	32.73	25.64
25	4.45	32.74	25	4.45	32.74	25.97
50	1.81	32.86	50	1.81	32.86	26.29
75	-1.16	33.29	75	-1.16	33.29	26.79
100	-0.79	33.52	100	-0.79	33.52	26.97
150	0.35	33.90	150	0.35	33.90	27.22
199	1.20	34.19	200	1.25	34.19	27.40
299	2.46	34.52	300	2.50	34.52	27.57
Station 5254: July 12; latitude 49°11' N., longitude 51°22' W.; depth 333 meters; dynamic height 971.042						
0	7.16	32.51	0	7.16	32.51	25.46
25	4.63	32.72	25	4.63	32.72	25.93
50	1.81	32.85	50	1.81	32.85	26.28
75	-1.23	33.21	75	-1.23	33.21	26.73
99	-0.92	33.41	100	-0.90	33.42	26.90
149	0.12	33.74	150	0.15	33.75	27.11
199	0.87	34.02	200	0.90	34.02	27.29
298	2.10	34.45	300	2.15	34.46	27.55
Station 5255: July 12; latitude 49°06' N., longitude 51°42' W.; depth 274 meters; dynamic height 971.078						
0	8.28	32.31	0	8.28	32.31	25.15
25	1.96	32.39	25	1.96	32.39	25.91
50	-1.41	32.89	50	-1.41	32.89	26.47
75	-1.62	33.06	75	-1.62	33.06	26.62
100	-1.50	33.16	100	-1.50	33.16	26.69
151	-1.01	33.36	150	-1.00	33.36	26.84
201	-0.37	33.61	200	-0.40	33.61	27.03
256	1.69	34.27				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5256; July 12; latitude 49°04' N., longitude 51°56' W.; depth 298 meters; dynamic height 971.094.							Station 5262; July 12; latitude 48°32' N., longitude 52°34' W.; depth 222 meters; dynamic height 971.108						
0	8.61	32.18	0	8.61	32.18	24.99	0	10.27	31.48	0	10.27	31.48	24.19
24	3.14	32.48	25	2.75	32.50	25.93	23	3.77	32.45	25	3.40	32.50	25.87
48	-1.04	32.94	50	-1.15	32.96	26.52	46	0.26	32.84	50	-0.10	32.87	26.41
71	-1.64	33.06	75	-1.65	33.07	26.63	69	-1.28	32.96	75	-1.50	32.99	26.56
95	-1.64	33.11	100	-1.65	33.12	26.67	92	-1.67	33.06	100	-1.65	33.08	26.63
143	-1.54	33.21	150	-1.50	33.23	26.75	138	-1.62	33.14	150	-1.55	33.18	26.71
190	-0.98	33.44	200	-0.75	33.50	26.95	183	-1.28	33.31	200	-1.05	33.40	26.88
271	1.27	34.15					211	-0.85	33.46				
Station 5257; July 12; latitude 48°58.5' N., longitude 52°13' W.; depth 292 meters; dynamic height 971.091.							Station 5263; July 12-13; latitude 48°20' N., longitude 52°06' W.; depth 187 meters; dynamic height 971.101						
0	8.83	32.27	0	8.83	32.27	25.03	0	9.81	31.62	0	9.81	31.62	24.37
25	4.03	32.41	25	4.03	32.41	25.75	24	6.05	32.00	25	5.90	32.03	25.25
49	-0.12	32.82	50	-0.15	32.83	26.39	48	0.95	32.79	50	0.70	32.82	26.33
74	-1.65	33.07	75	-1.65	33.07	26.63	72	-1.33	33.10	75	-1.40	33.11	26.65
99	-1.60	33.14	100	-1.60	33.14	26.68	96	-1.57	33.19	100	-1.55	33.21	26.74
148	-1.22	33.33	150	-1.20	33.33	26.83	144	-0.77	33.42	150	-0.65	33.45	26.91
197	-0.67	33.58	200	-0.60	33.59	27.01							
266	1.45	34.22											
Station 5258; July 12; latitude 48°54' N., longitude 52°34' W.; depth 224 meters; dynamic height 971.112.							Station 5264; July 13; latitude 48°16' N., longitude 51°55' W.; depth 201 meters; dynamic height 971.096						
0	9.78	32.18	0	9.78	32.18	24.80	0	10.28	31.68	0	10.28	31.68	24.34
25	3.91	32.53	25	3.91	32.53	25.86	25	3.97	32.25	25	3.97	32.25	25.62
50	1.88	32.67	50	1.88	32.67	26.14	49	-1.45	33.01	50	-1.45	33.01	26.58
74	-1.08	32.97	75	-1.15	32.98	26.54	74	-1.59	33.08	75	-1.60	33.08	26.63
99	-1.53	33.14	100	-1.55	33.15	26.69	99	-1.63	33.13	100	-1.65	33.13	26.67
149	-1.19	33.32	150	-1.20	33.32	26.82	148	-1.25	33.30	150	-1.20	33.30	26.80
198	-1.03	33.37	200	-1.00	33.37	26.85							
Station 5259; July 12; latitude 48°46' N., longitude 52°45' W.; depth 169 meters; dynamic height 971.132.							Station 5265; July 13; latitude 48°07' N., longitude 51°32' W.; depth 192 meters; dynamic height 971.092						
0	11.33	31.36	0	11.33	31.36	23.92	0	10.00	31.87	0	10.00	31.87	24.54
25	3.76	32.42	25	3.76	32.42	25.78	25	5.76	32.06	25	5.76	32.06	25.29
49	0.54	32.70	50	0.45	32.70	26.25	50	-0.74	32.97	50	-0.74	32.97	26.52
74	-1.48	32.97	75	-1.50	32.98	26.55	75	-1.61	33.16	75	-1.61	33.16	26.70
99	-1.61	33.10	100	-1.60	33.10	26.65	101	-1.46	33.17	100	-1.45	33.17	26.70
148	-1.60	33.12	150	-1.60	33.12	26.67	151	-0.35	33.59	150	-0.35	33.58	26.99
Station 5260; July 12; latitude 48°43.5' N., longitude 52°57' W.; depth 100 meters; dynamic height 971.150							Station 5266; July 13; latitude 47°58' N., longitude 51°09' W.; depth 167 meters; dynamic height 971.045						
0	12.09	31.09	0	12.09	31.09	23.57	0	9.68	32.01	0	9.68	32.01	24.70
27	1.90	32.35	25	2.65	32.26	25.75	21	5.69	32.28	25	4.40	32.41	25.72
53	0.11	32.60	50	0.25	32.58	26.17	41	0.32	32.90	50	-0.95	33.06	26.60
80	-1.09	32.79	75	-0.90	32.75	26.35	62	-1.41	33.19	75	-1.30	33.27	26.78
			(100)	-1.60	32.91	26.50	82	-1.13	33.31	100	-0.55	33.47	26.92
							119	0.07	33.68	(150)	1.15	34.05	27.29
Station 5261; July 12; latitude 48°37' N., longitude 52°43' W.; depth 272 meters; dynamic height 971.131							Station 5267; July 13; latitude 47°51' N., longitude 51°00' W.; depth 121 meters; dynamic height 971.060						
0	10.76	31.50	0	10.76	31.50	24.12	0	9.56	31.94	0	9.56	31.94	24.66
24	3.49	32.34	25	3.20	32.35	25.78	25	5.43	32.26	25	5.43	32.26	25.48
48	-0.73	32.74	50	-0.85	32.75	26.34	50	-0.43	33.00	50	-0.43	33.00	26.54
72	-1.40	32.92	75	-1.45	32.94	26.52	76	-1.61	33.19	75	-1.60	33.19	26.72
96	-1.61	33.02	100	-1.60	33.03	26.59	101	-1.23	33.34	100	-1.25	33.34	26.84
145	-1.63	33.08	150	-1.65	33.09	26.64							
193	-1.58	33.11	200	-1.55	33.11	26.66							

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values			Scaled values				σ_t	Observed values			Scaled values				σ_t			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters		Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰						
Station 5268; July 13; latitude 47°43' N., longitude 50°42' W.; depth 117 meters; dynamic height—971.057																		
0	10.09	31.87	0	10.09	31.87	24.52	0	7.66	32.75	0	7.66	32.75	25.58					
25	3.63	32.21	25	3.63	32.21	25.63	25	4.32	32.80	25	4.32	32.80	26.04					
49	-0.46	32.90	50	-0.50	32.91	26.46	50	0.98	33.08	50	0.98	33.08	26.53					
74	-1.12	33.18	75	-1.10	33.19	26.71	75	-0.26	33.38	75	-0.26	33.38	26.83					
98	-0.35	33.50	100	-0.25	33.54	26.96	100	0.06	33.62	100	0.06	33.62	27.02					
Station 5269; July 13; latitude 47°34' N., longitude 50°23' W.; depth 114 meters; dynamic height 971.074																		
0	10.69	31.66	0	10.69	31.66	24.26	150	0.29	33.90	150	0.29	33.90	27.22					
25	4.68	32.24	25	4.68	32.24	25.54	201	1.00	34.12	200	1.00	34.12	27.36					
50	-0.73	32.79	50	-0.73	32.79	26.38	331	2.48	34.58	300	2.50	34.58	27.61					
76	-0.89	33.11	75	-0.90	33.10	26.63	393	3.16	34.74	400	3.15	34.75	27.69					
101	-0.55	33.36	100	-0.55	33.35	26.82	597	3.36	34.84	600	3.35	34.84	27.74					
Station 5270; July 13; latitude 47°24' N., longitude 49°58' W.; depth 93 meters; dynamic height 971.092																		
0	10.87	31.80	0	10.87	31.80	24.33	0	8.22	32.70	0	8.22	32.70	25.45					
25	6.16	32.09	25	6.16	32.09	25.26	25	3.92	32.78	25	3.92	32.78	26.06					
50	2.76	32.46	50	2.76	32.46	25.90	50	-1.52	33.13	50	-1.52	33.13	26.67					
75	-0.06	32.94	75	-0.06	32.94	26.47	75	-1.31	33.29	75	-1.31	33.29	26.79					
Station 5271; July 13; latitude 47°45' N., longitude 49°48' W.; depth 115 meters; dynamic height 971.057																		
0	10.08	32.02	0	10.08	32.02	24.64	100	-0.77	33.52	100	-0.77	33.52	26.97					
25	4.20	32.26	25	4.20	32.26	25.61	150	0.79	34.02	150	0.79	34.02	27.29					
50	-0.15	32.83	50	-0.15	32.83	26.39	200	1.68	34.31	200	1.68	34.31	27.46					
75	-0.42	33.28	75	-0.42	33.28	26.76	300	2.45	34.58	300	2.45	34.58	27.61					
100	-0.28	33.42	100	-0.28	33.42	26.87	424	3.03	34.76	400	2.95	34.73	27.69					
Station 5272; July 13; latitude 47°57.5' N., longitude 49°42' W.; depth 169 meters; dynamic height 971.055																		
0	9.76	32.10	0	9.76	32.10	24.75	644	3.37	34.85	600	3.35	34.84	27.74					
25	3.77	32.44	25	3.77	32.44	25.80	846	3.35	34.875	800	3.35	34.87	27.77					
50	0.83	32.86	50	0.83	32.86	26.36	958	3.28	34.87	1,000	3.30	34.87	27.78					
75	-1.08	33.18	75	-1.08	33.18	26.70	Station 5275; July 14; latitude 48°37' N., longitude 49°27' W.; depth 1,079 meters; dynamic height 971.003											
101	-1.15	33.36	100	-1.15	33.36	26.85	0	8.22	32.70	0	8.22	32.70	25.45					
151	0.33	33.80	150	0.30	33.79	27.13	25	3.92	32.78	25	3.92	32.78	26.06					
Station 5273; July 13; latitude 48°12' N., longitude 49°36' W.; depth 220 meters; dynamic height 971.060																		
0	9.09	32.25	0	9.09	32.25	24.97	50	-1.52	33.13	50	-1.52	33.13	26.67					
25	3.43	32.58	25	3.43	32.58	25.94	75	-1.31	33.29	75	-1.31	33.29	26.79					
50	-1.47	33.01	50	-1.47	33.01	26.58	100	-0.77	33.52	100	-0.77	33.52	26.97					
75	-1.62	33.14	75	-1.62	33.14	26.68	150	0.79	34.02	150	0.79	34.02	27.29					
100	-1.31	33.27	100	-1.31	33.27	26.78	200	1.68	34.31	200	1.68	34.31	27.46					
151	-0.74	33.51	150	-0.75	33.51	26.96	300	2.45	34.58	300	2.45	34.58	27.61					
201	0.16	33.78	200	0.15	33.78	27.13	424	3.03	34.76	400	2.95	34.73	27.69					
Station 5274; July 13-14; latitude 48°29.5' N., longitude 49°25' W.; depth 622 meters; dynamic height 971.013																		
0	7.66	32.75	0	7.66	32.75	25.58	644	3.37	34.85	600	3.35	34.84	27.74					
25	4.32	32.80	25	4.32	32.80	26.04	846	3.35	34.875	800	3.35	34.87	27.77					
50	0.98	33.08	50	0.98	33.08	26.53	958	3.28	34.87	1,000	3.30	34.87	27.78					
75	-0.26	33.38	75	-0.26	33.38	26.83	Station 5276; July 14; latitude 49°04.5' N., longitude 49°15' W.; depth 1,646 meters; dynamic height 970.915											
100	0.06	33.62	100	0.06	33.62	27.02	0	6.98	32.84	0	6.98	32.84	25.74					
150	0.29	33.90	150	0.29	33.90	27.22	25	-0.51	33.40	25	-0.51	33.40	26.86					
201	1.00	34.12	200	1.00	34.12	27.36	51	-0.10	33.74	50	-0.10	33.74	27.11					
331	2.48	34.58	300	2.50	34.58	27.61	76	0.89	34.03	75	0.85	34.03	27.29					
393	3.16	34.74	400	3.15	34.75	27.69	101	1.60	34.29	100	1.55	34.28	27.44					
597	3.36	34.84	600	3.35	34.84	27.74	152	2.16	34.46	150	2.15	34.45	27.54					
Station 5275; July 14; latitude 48°37' N., longitude 49°27' W.; depth 1,079 meters; dynamic height 971.003																		
0	8.22	32.70	0	8.22	32.70	25.45	203	2.59	34.62	200	2.55	34.61	27.64					
25	3.92	32.78	25	3.92	32.78	26.06	304	3.12	34.76	300	3.10	34.76	27.71					
50	-1.52	33.13	50	-1.52	33.13	26.67	395	3.32	34.80	400	3.30	34.80	27.72					
75	-1.31	33.29	75	-1.31	33.29	26.79	595	3.31	34.82	600	3.30	34.82	27.74					
100	-0.77	33.52	100	-0.77	33.52	26.97	794	3.31	34.80	800	3.30	34.82	27.74					
150	0.79	34.02	150	0.79	34.02	27.29	996	3.28	34.825	1,000	3.30	34.83	27.74					
200	1.68	34.31	200	1.68	34.31	27.46	1,503	3.29	34.83									
300	2.45	34.58	300	2.45	34.58	27.61	Station 5277; July 14; latitude 49°33' N., longitude 49°11' W.; depth 1,609 meters; dynamic height 970.876											
424	3.03	34.76	400	2.95	34.73	27.69	0	8.00	33.58	0	8.00	33.58	26.18					
644	3.37	34.85	600	3.35	34.84	27.74	25	3.73	33.91	25	3.73	33.91	26.96					
846	3.35	34.875	800	3.35	34.87	27.77	51	2.72	34.32	50	2.70	34.31	27.38					
958	3.28	34.87	1,000	3.30	34.87	27.78	76	2.68	34.54	75	2.70	34.53	27.55					
Station 5276; July 14; latitude 49°04.5' N., longitude 49°15' W.; depth 1,646 meters; dynamic height 970.915																		
0	6.98	32.84	0	6.98	32.84	25.74	101	2.82	34.64	100	2.80	34.64	27.63					
25	-0.51	33.40	25	-0.51	33.40	26.86	152	3.19	34.74	150	3.20	34.74	27.68					
51	-0.10	33.74	50	-0.10	33.74	27.11	203	3.21	34.78	200	3.20	34.78	27.71					
76	0.89	34.03	75	0.85	34.03	27.29	304	3.29	34.80	300	3.30	34.80	27.72					
101	1.60	34.29	100	1.55	34.28	27.44	416	3.34	34.82	400	3.35	34.82	27.73					
152	2.16	34.46	150	2.15	34.45	27.54	642	3.36	34.82	600	3.35	34.82	27.73					
203	2.59	34.62	200	2.55	34.61	27.64	853	3.27	34.85	800	3.30	34.83	27.74					
304	3.12	34.76	300	3.10	34.76	27.71	1,066	3.23	34.83	1,000	3.25	34.83	27.74					
395	3.32	34.80	400	3.30	34.80	27.72	1,600	3.29	34.84									
595	3.31	34.82	600	3.30	34.82	27.74	Station 5277; July 14; latitude 49°33' N., longitude 49°11' W.; depth 1,609 meters; dynamic height 970.876											
794	3.31	34.80	800	3.30	34.82	27.74	0	8.00	33.58	0	8.00	33.58	26.18					
996	3.28	34.825	1,000	3.30	34.83	27.74	25	3.73	33.91	25	3.73	33.91	26.96					
1,503	3.29	34.83					51	2.72	34.32	50	2.70	34.31	27.38					
Station 5277; July 14; latitude 49°33' N., longitude 49°11' W.; depth 1,609 meters; dynamic height 970.876																		
0	8.00	33.58	0	8.00	33.58	26.18	76	2.68	34.54	75	2.70	34.53	27.55					
25	3.73	33.91	25	3.73	33.91	26.96	101	2.82	34.64	100	2.80	34.64	27.63					
51	2.72	34.32	50	2.70	34.31	27.38	152	3.19	34.74	150	3.20	34.74	27.68					
76	2.68	34.54	75	2.70	34.53	27.55	203	3.21	34.78	200	3.20	34.78	27.71					
101	2.82	34.64	100	2.80	34.64	27.63	304	3.29	34.80	300	3.30	34.80	27.72					
152	3.19	34.74	150	3.20	34.74	27.68	416	3.34	34.82	400	3.35	34.82	27.73					
203	3.21	34.78	200	3.20	34.78	27.71	642	3.36	34.82	600	3.35	34.82	27.73					
304	3.29	34.80	300	3.30	34.80	27.72	853	3.27	34.85	800	3.30	34.83	27.74					
416	3.34	34.82	400	3.35	34.82	27.73	1,066	3.23	34.83	1,000	3.25	34.83	27.74					
642	3.36	34.82	600	3.35	34.82	27.73	1,600	3.29	34.84									
853	3.27	34.85	800	3.30	34.83	27.74	Station 5278; July 14; latitude 49°33' N., longitude 49°11' W.; depth 1,609 meters; dynamic height 970.876											
1,066	3.23	34.83	1,000	3.25	34.83	27.74	0	8.00	33.58	0	8.00	33.58	26.18					
1,600	3.29	34.84					25	3.73	33.91	25	3.73	33.91	26.96					
Station 5278; July 14; latitude 49°33' N., longitude 49°11' W.; depth 1,609 meters; dynamic height 970.876																		
0	8.00	33.58	0	8.00	33.58	26.18	51	2.72	34.32	50	2.70	34.31	27.38					
25	3.73	33.91	25	3.73	33.91	26.96	76	2.68	34.54	75	2.70	34.53	27.55					
51	2.72	34.32	50	2.70	34.31	27.38	101	2.82	34.64	100	2.80	34.64	27.63					
76	2.68	34.54	75	2.70	34.53	27.55	152	3.19	34.74	150	3.20	34.74	27.68					
101	2.82	34.64	100	2.80	34.64	27.63	203	3.21	34.78	200	3.20	34.78	27.71					
152	3.19	34.74	150	3.20	34.74	27.68	304	3.29	34.80	300	3.30	34.80	27.72					
203	3.21	34.78	200	3.20	34.78	27.71	416	3.34	34.82	400	3.35	34.82	27.73					
304	3.29	34.80	300	3.30	34.80	27.72	642	3.36	34.82	600	3.35	34.82	27.73					
416	3.34	34.82	400	3.35	34.82	27.73	853	3.27	34.85	800	3.30	34.83	27.74					
642																		

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5278; July 14; latitude 49°59' N., longitude 48°58' W.; depth 1,829 meters; dynamic height 970.866								Station 5283; July 16; latitude 54°14' N., longitude 54°56' W.; depth 174 meters; dynamic height 1454.850							
0	9.07	33.70		0	9.07	33.70	26.10	0	5.99	32.04		0	5.99	32.04	25.24
25	6.21	33.99		25	6.21	33.99	26.75	25	2.68	32.18		25	2.68	32.18	25.68
50	3.39	34.37		50	3.39	34.37	27.37	51	-0.56	32.82		50	-0.50	32.81	26.39
75	2.90	34.65		75	2.90	34.65	27.64	76	-1.17	32.99		75	-1.15	32.98	26.54
100	3.08	34.74		100	3.08	34.74	27.69	101	-1.15	33.19		100	-1.15	33.19	26.71
150	3.25	34.79		150	3.25	34.79	27.71	152	-0.88	33.52		150	-0.90	33.51	26.97
201	3.33			200	3.35	34.82	27.73								
301	3.42	34.84		300	3.40	34.84	27.74								
406	3.39	34.83		400	3.40	34.84	27.74								
625	3.27	34.84		600	3.30	34.84	27.75								
830	3.28	34.83		800	3.30	34.84	27.75								
1,041	3.25	34.835		1,000	3.25	34.84	27.75								
1,570	3.31	34.83													
Station 5279; July 16; latitude 53°43' N., longitude 55°48' W.; depth 112 meters; dynamic height 1454.972								Station 5284; July 16; latitude 54°31' N., longitude 54°24' W.; depth 225 meters; dynamic height 1454.810							
0	9.19	26.33		0	9.19	26.33	20.35	0	4.98	31.88		0	4.98	31.88	25.23
26	0.63	32.07		25	0.69	32.72	25.54	25	-0.69	32.72		25	-0.69	32.72	26.32
51	-0.25	32.37		50	-0.20	32.36	26.01	50	-1.00	33.03		50	-1.00	33.03	26.57
77	-0.81	32.50		75	-0.80	32.49	26.13	76	-1.06	33.21		75	-1.05	33.21	26.73
97	-1.00	32.55		100	-1.00	32.55	26.20	101	-1.00	33.42		100	-1.00	33.42	26.90
								151	-0.44	33.70		150	-0.45	33.70	27.10
								202	0.17	33.92		200	0.15	33.91	27.24
Station 5280; July 16; latitude 53°49.5 N., longitude 55°32' W.; depth 218 meters; dynamic height 1454.881								Station 5285; July 16; latitude 54°48' N., longitude 53°54' W.; depth 327 meters; dynamic height 1454.730							
0	7.12	30.99		0	7.12	30.99	24.26	0	4.72	31.61		0	4.72	31.61	25.04
26	1.27	32.34		25	1.50	32.29	25.85	25	0.67	33.24		25	0.67	33.24	26.67
52	-1.12	32.71		50	-1.10	32.70	26.31	50	0.03	33.73		50	0.03	33.73	27.10
78	-1.19	32.90		75	-1.20	32.88	26.46	75	0.48	33.96		75	0.48	33.96	27.26
104	-1.20	33.02		100	-1.20	33.00	26.56	101	0.76	34.04		100	0.75	34.04	27.31
156	-1.14	33.26		150	-1.15	33.23	26.74	151	2.05	34.40		150	2.05	34.40	27.51
198	-0.79	33.56		200	-0.75	33.57	27.01	201	2.29	34.49		200	2.30	34.49	27.56
								302	3.10	34.72		300	3.10	34.72	27.68
Station 5281; July 16; latitude 53°53' N., longitude 55°26' W.; depth 181 meters; dynamic height 1454.862								Station 5286; July 16; latitude 54°53' N., longitude 53°40' W.; depth 631 meters; dynamic height 1454.702							
0	7.12	31.08		0	7.12	31.08	24.34	0	4.27	32.44		0	4.27	32.44	25.75
25	0.57	32.33		25	0.57	32.33	25.94	25	0.53	33.77		25	0.53	33.77	27.11
51	-0.92	32.70		50	-0.95	32.69	26.30	50	0.87	33.97		50	0.87	33.97	27.25
76	-1.17	32.91		75	-1.15	32.91	26.48	75	1.66	34.18		75	1.66	34.18	27.36
101	-1.14	33.10		100	-1.15	33.10	26.64	100	1.84	34.28		100	1.84	34.28	27.42
152	-0.83	33.56		150	-0.85	33.54	26.98	150	2.85	34.48		150	2.85	34.48	27.50
								201	3.02	34.60		200	3.00	34.60	27.59
								301	3.25	34.72		300	3.25	34.72	27.66
								393	3.35	34.77		400	3.35	34.77	27.69
								595	3.39	34.80		600	3.40	34.80	27.71
Station 5282; July 16; latitude 54°03' N., longitude 55°04' W.; depth 161 meters; dynamic height 1454.842								Station 5287; July 16; latitude 54°59' N., longitude 53°26' W.; depth 1,582 meters; dynamic height 1454.625							
0	5.96	31.95		0	5.96	31.95	25.17	0	5.30	33.92		0	5.30	33.92	26.81
26	1.03	32.44		25	1.25	32.42	25.98	25	5.83	34.37		25	5.83	34.37	27.10
51	-1.21	32.88		50	-1.20	32.86	26.45	51	4.34	34.55		50	4.40	34.55	27.41
77	-1.15	33.04		75	-1.15	33.03	26.58	76	3.29	34.61		75	3.30	34.61	27.57
103	-1.14	33.22		100	-1.15	33.20	26.72	102	3.31	34.67		100	3.30	34.66	27.61
144	-1.00	33.46		150	-1.00	33.49	26.95	153	3.42	34.75		150	3.40	34.74	27.66
								204	3.45	34.80		200	3.45	34.79	27.69
								306	3.51	34.85		300	3.50	34.85	27.74
								369	3.47	34.86		400	3.45	34.86	27.75
								590	3.39	34.86		600	3.40	34.86	27.76
								798	3.34	34.86		800	3.35	34.86	27.76
								1,010	3.32	34.86		1,000	3.30	34.86	27.77
								1,542	3.29	34.86		1,500	3.30	34.86	27.77

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5288; July 16; latitude 55°04' N., longitude 53°17' W.; depth 2,195 meters; dynamic height 1454.607								Station 5291; July 17-18; latitude 55°58' N., longitude 51°52' W.; depth 3,365 meters; dynamic height 1454.621							
0	7.58	34.33		0	7.58	34.38	26.86	0	7.74	34.32		0	7.74	34.32	26.80
25	5.54	34.56		25	5.54	34.56	27.28	27	7.73	34.32		25	7.75	34.32	26.80
50	3.88	34.72		50	3.88	34.72	27.60	53	4.13	34.52		50	4.45	34.50	27.36
74	3.62	34.74		75	3.60	34.74	27.64	80	3.57	34.60		75	3.65	34.59	27.51
99	3.53	34.80		100	3.55	34.80	27.69	106	3.44	34.68		100	3.45	34.67	27.60
149	3.63	34.84		150	3.65	34.84	27.71	160	3.10	34.72		150	3.10	34.71	27.67
198	3.58	34.85		200	3.60	34.85	27.73	214	3.21	34.80		200	3.20	34.78	27.71
297	3.49	34.86		300	3.50	34.86	27.75	320	3.28	34.83		300	3.30	34.82	27.74
382	3.44	34.85		400	3.45	34.86	27.75	490	3.30	34.86		400	3.30	34.85	27.76
597	3.37	34.86		600	3.35	34.86	27.76	776	3.27	34.86		600	3.30	34.86	27.77
812	3.36	34.86		800	3.35	34.86	27.76	1,080	3.27	34.87		800	3.25	34.86	27.77
1,031	3.34			1,000	3.35	34.86	27.76	1,310	3.27	34.87		1,000	3.25	34.87	27.78
1,495	3.31	34.88		1,500	3.30	34.88	27.78	1,789	3.31	34.88		1,500	3.30	34.88	27.78
1,963	3.09	34.87		2,000	3.10	34.87	27.80	2,270	3.25	34.91		2,000	3.30	34.90	27.80
								2,354	3.21	34.91		2,500	3.10	34.91	27.83
								2,979	2.58	34.89		3,000	2.55	34.89	27.86
								3,264	1.92	34.86					
Station 5289; July 17; latitude 55°12.5' N., longitude 52°56' W.; depth 2,926 meters; dynamic height 1454.606								Station 5292; July 18; latitude 56°29' N., longitude 50°42' W.; depth 3,548 meters; dynamic height 1454.655							
0	7.87	34.50		0	7.87	34.50	26.92	0	7.21	34.36		0	7.21	34.36	26.91
25	6.49	34.64		25	6.49	34.64	27.22	23	7.22	34.38		25	7.20	34.38	26.92
50	4.57	34.71		50	4.57	34.71	27.51	45	7.22	34.39		50	7.00	34.40	26.97
75	3.68	34.76		75	3.68	34.76	27.65	68	5.78	34.52		75	5.25	34.58	27.33
99	3.57	34.79		100	3.55	34.79	27.68	90	4.44	34.68		100	4.15	34.68	27.53
149	3.44	34.82		150	3.45	34.82	27.72	135	3.59	34.67		150	3.50	34.68	27.60
199	3.46	34.84		200	3.50	34.84	27.73	181	3.44	34.72		200	3.45	34.74	27.65
298	3.46	34.86		300	3.45	34.86	27.75	271	3.43	34.80		300	3.40	34.81	27.72
397	3.44	34.86		400	3.45	34.86	27.75	381	3.38	34.84		400	3.40	34.84	27.74
621	3.34	34.86		600	3.35	34.86	27.76	598	3.39	34.85		600	3.40	34.85	27.75
859	3.33	34.88		800	3.35	34.88	27.77	819	3.31	34.86		800	3.30	34.86	27.77
1,074	3.33	34.88		1,000	3.35	34.88	27.77	1,042	3.28	34.86		1,000	3.30	34.86	27.77
1,551	3.35	34.88		1,500	3.35	34.88	27.77	1,511	3.25	34.86		1,500	3.25	34.86	27.77
2,029	3.18	34.91		2,000	3.20	34.91	27.82	1,987	3.38	34.89		2,000	3.40	34.89	27.78
2,431	2.78	34.90		2,500	2.65	34.90	27.86	2,536	3.17	34.91		2,500	3.20	34.91	27.82
2,730	2.01	34.88						3,012	2.77	34.92		3,000	2.80	34.92	27.86
								3,450	1.99	34.87		(3,500)	1.85	34.86	27.89
Station 5290; July 17; latitude 55°26' N., longitude 52°30' W.; depth 3,182 meters; dynamic height 1454.611								Station 5293; July 19; latitude 56°57.5' N., longitude 49°33' W.; depth 3,603 meters; dynamic height 1454.650							
0	7.69	34.22		0	7.69	34.22	26.73	0	7.00	34.44		0	7.00	34.44	27.00
27	6.08	34.32		25	6.20	34.31	27.00	25	7.01	34.44		25	7.01	34.44	27.00
53	3.54	34.56		50	3.75	34.53	27.45	50	6.48	34.49		50	6.48	34.49	27.10
80	3.19	34.68		75	3.25	34.66	27.61	75	3.90	34.66		75	3.90	34.66	27.55
106	3.18	34.74		100	3.20	34.73	27.67	100	3.60	34.67		100	3.60	34.67	27.59
161	3.35	34.81		150	3.30	34.80	27.72	148	3.31	34.74		150	3.30	34.74	27.67
214	3.26	34.82		200	3.30	34.82	27.74	198	3.35	34.78		200	3.40	34.78	27.69
320	3.29	34.83		300	3.35	34.84	27.74	298	3.60	34.86		300	3.60	34.86	27.74
308	3.42	34.86		400	3.35	34.86	27.76	2,436	3.17	34.88		400	3.60	34.86	27.74
497	3.36	34.86		600	3.30	34.86	27.77	2,859	2.83	34.89		600	3.40	34.835	27.74
706	3.24	34.86		800	3.25	34.86	27.77	3,325	2.28	34.88		800	3.30	34.83	27.74
940	3.25	34.86		1,000	3.25	34.86	27.77					1,000	3.25	34.835	27.75
1,374	3.23	34.86		1,500	3.25	34.86	27.77					1,500	3.25	34.85	27.76
1,836	3.36			2,000	3.25	34.90	27.80					2,000	3.20	34.87	27.79
1,706	3.23	34.86		2,500	2.90	34.90	27.84					2,500	3.15	34.88	27.79
2,136	3.25	34.91		(3,000)	1.60	34.86	27.91					3,000	2.70	34.91	27.86
2,537	2.82	34.90										(3,500)	1.95	34.86	27.89

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1953—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature °C.	Salinity, ‰		Depth, meters	Temperature °C.	Salinity, ‰	σ_t	Depth, meters	Temperature °C.	Salinity, ‰		Depth, meters	Temperature °C.	Salinity, ‰	σ_t
Station 5294; July 19; latitude 57°30' N., longitude 48°23' W.; depth 3,402 meters; dynamic height 1454.642								Station 5297; July 20; latitude 58°59.5' N., longitude 45°31' W.; depth 2,469 meters; dynamic height 1454.646							
0	6.50	34.60		0	6.50	34.60	27.19	0	7.20	34.75		0	7.20	34.75	27.21
24	6.33	34.60		25	6.30	34.60	27.22	25	6.91	34.73		25	6.91	34.73	27.24
47	6.30	34.60		50	6.30	34.60	27.22	50	6.48	34.83		50	6.48	34.83	27.37
71	5.18	34.67		75	4.90	34.68	27.45	76	5.31	34.86		75	5.30	34.86	27.55
94	3.81	34.72		100	3.80	34.73	27.61	101	5.12	34.925		100	5.15	34.92	27.62
142	3.73	34.78		150	3.75	34.78	27.65	151	5.04	34.925		150	5.05	34.92	27.63
189	3.81			200	3.80	34.80	27.67	201	4.63	34.91		200	4.65	34.91	27.67
283	3.48	34.82		300	3.50	34.83	27.72	302	4.39	34.90		300	4.40	34.90	27.68
321	3.50	34.84		400	3.45	34.84	27.73	403	4.18	34.90		400	4.20	34.90	27.71
499	3.35	34.84		600	3.65	34.86	27.73	560	3.90	34.86		600	3.80	34.86	27.72
685	3.81	34.87		800	3.45	34.84	27.73	704	3.59	34.865		800	3.50	34.87	27.76
874	3.27	34.83		1,000	3.25	34.83	27.74	855	3.52	34.87		1,000	3.45	34.87	27.76
1,328	3.23	34.83		1,500	3.25	34.84	27.75	1,294	3.36	34.86		1,500	3.30	34.88	27.78
1,837	3.27	34.86		2,000	3.30	34.88	27.78	1,753	3.22	34.89		2,000	3.00	34.89	27.82
1,922	3.41	34.89		2,500	3.05	34.90	27.82	2,238	2.57	34.885					
2,363	3.13	34.90		(3,000)	2.60	34.90	27.86								
2,770	2.86	34.91													
Station 5295; July 19; latitude 58°05' N., longitude 47°14' W.; depth 3,237 meters; dynamic height 1454.634								Station 5298; July 20; latitude 59°13' N., longitude 44°58' W.; depth 1,975 meters; dynamic height 1454.733							
0	6.61	34.57		0	6.61	34.57	27.16	0	5.57	34.30		0	5.57	34.30	27.07
27	6.30	34.56		25	6.30	34.56	27.19	19	5.55	34.37		25	5.55	34.40	27.15
53	5.05	34.74		50	5.20	34.73	27.45	37	5.62	34.48		50	5.85	34.65	27.32
80	4.38	34.77		75	4.45	34.76	27.57	56	5.96	34.73		75	5.10	34.68	27.43
106	3.93	34.80		100	4.00	34.79	27.64	74	5.15	34.68		100	5.00	34.75	27.50
160	4.01	34.84		150	4.00	34.83	27.67	111	4.89	34.77		150	4.30	34.72	27.56
213	4.08	34.86		200	4.10	34.85	27.68	148	4.28	34.72		200	4.35	34.76	27.58
319	3.78	34.86		300	3.85	34.86	27.71	222	4.45	34.78		300	4.85	34.85	27.59
423	3.60	34.87		400	3.60	34.87	27.75	311	4.89	34.86		400	4.65	34.88	27.64
647	3.50	34.855		600	3.50	34.86	27.75	456	4.59	34.89		600	4.50	34.90	27.67
875	3.39	34.845		800	3.40	34.85	27.75	600	4.48	34.90		800	4.30	34.91	27.70
1,103	3.32	34.84		1,000	3.35	34.845	27.75	758	4.32	34.91		1,000	4.10	34.91	27.73
1,582	3.41	34.87		1,500	3.40	34.86	27.76	1,190	3.97	34.91		1,500	3.65	34.90	27.76
2,060	3.22	34.905		2,000	3.25	34.90	27.80	1,731	3.44	34.89					
2,615	2.76	34.90		2,500	2.90	34.90	27.84								
3,063	1.66	34.86		3,000	1.90	34.87	27.90								
Station 5296; July 20; latitude 58°39' N., longitude 46°12' W.; depth 2,698 meters; dynamic height 1454.626								Station 5299; July 20; latitude 59°19.5' N., longitude 44°30' W.; depth 1,188 meters; dynamic height 1454.763							
0	7.03	34.55		0	7.03	34.55	27.08	0	3.56	33.97		0	3.56	33.97	27.03
25	6.72	34.58		25	6.72	34.58	27.15	28	3.15	34.01		25	3.20	34.00	27.09
50	5.88	34.66		50	5.88	34.66	27.32	55	2.76	34.15		50	2.80	34.10	27.21
75	4.85	34.75		75	4.85	34.75	27.52	82	4.28	34.48		75	3.80	34.38	27.33
100	3.81	34.76		100	3.81	34.76	27.64	109	4.75	34.58		100	4.65	34.55	27.38
150	3.68	34.74		150	3.68	34.75	27.64	165	4.98	34.73		150	4.95	34.70	27.46
200	3.84	34.86		200	3.84	34.86	27.71	219	4.95	34.80		200	4.95	34.78	27.52
300	3.58	34.86		300	3.58	34.86	27.74	328	4.83	34.84		300	4.85	34.83	27.57
400	3.44	34.85		400	3.44	34.85	27.74	432	4.73	34.88		400	4.75	34.87	27.62
625	3.40	34.86		600	3.40	34.86	27.76	649	4.54	34.89		600	4.60	34.89	27.65
854	3.38			800	3.35	34.86	27.76	868	4.15	34.90		800	4.25	34.90	27.70
1,080	3.41	34.87		1,000	3.40	34.87	27.77	1,087	3.90	34.90		1,000	4.00	34.90	27.73
1,581	3.41	34.88		1,500	3.40	34.88	27.77								
2,038	2.92	34.87		2,000	3.00	34.87	27.81								
2,517	2.27	34.88		2,500	2.30	34.88	27.87								
								Station 5300; July 20; latitude 59°33' N., longitude 44°07' W.; depth 171 meters; dynamic height 1454.923							
0	0.19	31.80		0	0.19	31.80	25.54	0	0.19	31.80		0	0.19	31.80	25.54
29	-0.03	31.98		25	0.00	31.95	25.67	29	-0.03	31.98		25	0.00	31.95	25.67
58	0.07	32.26		50	0.05	32.16	25.84	58	0.07	32.26		50	0.05	32.16	25.84
87	-0.16	32.87		75	-0.05	32.59	26.19	87	-0.16	32.87		75	-0.05	32.59	26.19
115	1.18	33.54		100	0.35	33.19	26.65	115	1.18	33.54		100	0.35	33.19	26.65
173	3.84	34.36		150	2.95	34.06	27.16	173	3.84	34.36		150	2.95	34.06	27.16

In the following table the potential density is represented by $\sigma_{t\theta}$ which signifies 1,000 (density-1) at atmospheric pressure and potential temperature t_θ . The concentration of total phosphorus is given in microgram-atoms per liter.

TOTAL PHOSPHORUS DATA COLLECTED IN 1952

Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{ga/L}$	Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{ga/L}$	Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{ga/L}$
Station 4741; Apr. 29; latitude 47°16' N., longitude 49°14' W.; depth 91 meters			Station 4746; Apr. 30; latitude 47°48.5' N., longitude 46°54' W.; depth 646 meters			Station 4750; Apr. 30; latitude 47°43' N., longitude 45°40' W.; depth 306 meters		
0	26.30	0.63	0	27.26	0.92	0	27.03	0.91
26	26.34	0.70	22	27.32	0.99	23	27.18	0.96
52	26.37	0.76	43	27.35	0.93	47	27.26	1.06
78	26.71	0.92	65	27.36	0.93	70	27.31	1.31
			86	27.41	0.94	94	27.38	1.15
			129	27.50	1.06	141	27.46	1.20
			173	27.57	1.07	187	27.55	1.20
			259	27.67	1.17	253	27.67	1.33
			350	27.71	1.09			
			532	27.75	1.08			
Station 4742; Apr. 29; latitude 47°22' N., longitude 48°47' W.; depth 139 meters			Station 4747; Apr. 30; latitude 47°59.5' N., longitude 46°21' W.; depth 1,171 meters			Station 4751; Apr. 30; latitude 47°29' N., longitude 45°04' W.; depth 224 meters		
0	26.34	0.59	0	27.21	1.22	0	26.72	0.63
25	26.40	0.70	25	27.34	1.27	24	26.73	0.67
49	26.41	0.68	50	27.40	1.36	49	26.74	0.60
74	26.70	0.88	76	27.46	1.39	73	26.74	0.62
98		0.73	100	27.51	1.44	97	26.89	0.65
128	26.93	1.05	151	27.60	1.40	146		1.37
			201	27.66	1.77	194	27.48	1.00
			301	27.70	1.56			
			330	27.71	1.44			
			507	27.72	1.68			
			692	27.75	1.41	Station 4752; Apr. 30; latitude 47°22' N., longitude 45°00' W.; depth 188 meters		
			896	27.77	1.67	0	26.70	0.64
						26	26.73	0.64
						51	26.73	0.54
						77	26.75	0.91
						101	27.04	0.68
						153	27.40	1.00
Station 4743; Apr. 29; latitude 47°28.5' N., longitude 48°26' W.; depth 174 meters			Station 4748; Apr. 30; latitude 47°55.5' N., longitude 46°10' W., depth 1,060 meters			Station 4753; Apr. 30; latitude 47°23' N., longitude 45°13' W.; depth 220 meters		
0	26.37	0.63	0	27.13	0.84	0	26.73	0.62
25	26.42	0.77	26	27.20	0.89	23	26.73	0.55
50	26.48	0.90	51	27.23	0.82	47	26.72	0.66
75	26.73	1.08	77	27.47	0.87	70	26.73	0.58
99	26.84	1.09	102	27.55	0.87	93	26.79	0.70
149	27.10	1.01	152	27.62	0.86	140	27.31	0.89
			203	27.66	0.94	186	27.50	0.95
			305	27.71	0.82			
			415	27.72	0.95			
			614	27.74	0.93			
			821	27.77	1.02			
			1,028	27.79	1.16			
Station 4744; Apr. 29; latitude 47°34' N., longitude 48°04' W.; depth 218 meters			Station 4749; Apr. 30; latitude 47°47' N., longitude 45°50' W.; depth 436 meters			Station 4754; Apr. 30; latitude 47°22' N., longitude 45°35' W.; depth 265 meters		
0	26.43	0.71	0	27.02	0.93	0	26.73	0.61
25	26.51	0.88	21	27.10	0.94	26	26.73	0.66
50	26.68	1.09	43	27.26	0.87	51	26.74	0.64
75	26.76	0.88	64	27.32	1.07	77	26.75	0.60
100	26.87	0.95	86	27.42	1.14	102	27.20	0.89
201	27.33	1.10	128	27.53	1.35	153	27.46	0.97
			170	27.59	1.19	204	27.59	1.10
			256	27.67	1.13			
			341	27.70	1.15			
Station 4745; Apr. 29; latitude 47°41.5' N., longitude 47°32' W., depth 315 meters								
0	26.75	0.91						
25	26.90	0.91						
49	26.94	0.91						
74	27.10	0.96						
99	27.18	1.09						
148	27.35	1.08						
197	27.47	0.94						
286	27.54	1.08						

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	σ_{10}	Total P $\mu\text{g}/\text{L}$	Depth meters	σ_{10}	Total P $\mu\text{g}/\text{L}$	Depth meters	σ_{10}	Total P $\mu\text{g}/\text{L}$
Station 4755; Apr. 30; latitude 47°22' N., longitude 45°53' W.; depth 318 meters			Station 4760; May 1; latitude 47°05.5' N., longitude 47°49' W.; depth 174 meters			Station 4796; May 5; latitude 45°27' N., longitude 46°00' W., depth 3,402 meters		
0	26.73	0.53	0	26.34	0.74	0	26.55	0.61
25	26.75	0.65	21	26.40	0.76	25	26.59	0.64
49	27.04	0.78	42	26.57	0.87	49	26.66	0.60
74	27.08	0.77	63	26.76	0.92	74	26.90	0.79
98	27.20	1.70	84	26.81	0.86	98	27.05	1.01
147	27.36	1.04	168	27.01	1.05	147	27.21	1.24
197	27.59	0.97				196	27.34	1.21
295	27.69	1.02				294	27.52	1.24
Station 4756; Apr. 30; latitude 47°22' N., longitude 46°14' W.; depth 635 meters			Station 4761; May 1; latitude 46°59' N., longitude 48°10' W.; depth 134 meters			336	27.55	1.32
0	27.02	0.72	0	26.31	0.65	535	27.72	1.27
25	27.04	0.76	30	26.39	0.98	734	27.73	1.27
50	27.20	0.88	58	26.46	1.36	929	27.76	1.27
75	27.30	0.95	88	26.76	1.02	1,434		1.34
100	27.36	1.12	116	26.93	1.04			
150	27.47	1.13	Station 4762; May 1; latitude 46°48' N., longitude 48°43' W.; depth 102 meters			Station 4797; May 5; latitude 45°30' N., longitude 45°25' W.; depth 3,658 meters		
200	27.54	1.14	0	26.26	0.69	0	26.26	0.52
300	27.67	1.15	24	26.32	0.63	25	26.65	0.59
376	27.69	0.88	49	26.33	0.82	50	26.78	0.67
570		0.87	73	26.60	1.16	75	26.84	0.67
Station 4757; May 1; latitude 47°19' N., longitude 47°06' W.; depth 558 meters			Station 4793; May 4; latitude 45°34.5' N., longitude 47°32' W.; depth 1,439 meters			100	26.86	0.70
0	26.52	1.36	24	26.26	0.69	150	26.98	1.03
25	26.81	1.32	49	26.33	0.82	200	27.16	1.21
51	27.01	1.40	73	26.60	1.16	300	27.43	1.69
77	27.17	1.23				411	27.57	1.40
103	27.25	1.32				618	27.71	1.28
153	27.44	1.35				825	27.77	1.25
204	27.54	1.44				1,032	27.77	1.19
307	27.63	1.7				1,550	27.82	1.10
411	27.69	1.43						
Station 4758; May 1; latitude 47°16.5' N., longitude 47°16' W.; depth 330 meters			24	26.83	0.90	Station 4798; May 5; latitude 44°45.5' N., longitude 45°23' W.; depth 3,896 meters		
0	26.54	0.91	48	27.07	1.06	0	26.62	0.49
22	26.56	0.91	72	27.30	0.96	26	26.70	0.48
45	26.76	1.14	96	27.43	1.32	53	26.71	0.49
67	26.95	0.92	144	27.51	1.26	79	26.73	0.58
89	27.04	1.07	192	27.59	1.26	105	26.73	0.55
133	27.28	1.09	992	27.76	1.17	157	26.78	0.67
178	27.45	1.00	1,341	27.77	1.14	209	26.86	0.75
267	27.60	1.16				314	27.13	1.26
Station 4759; May 1; latitude 47°11.5' N., longitude 47°32' W.; depth 227 meters			Station 4794; May 4; latitude 45°20' N., longitude 47°23' W.; depth 2,509 meters			474	27.45	1.45
0	26.36	0.73	76	27.11	1.02	646	27.65	1.29
25	26.52	0.84	101	27.27	1.21	825	27.73	1.50
51	26.68	0.94	151	27.42	1.27	1,306	27.78	1.15
76	26.83	0.95	201	27.51	1.31			
101	26.93	1.07	302	27.64	1.32	Station 4799; May 5; latitude 44°18.5' N., longitude 45°15' W.; depth 4,115 meters		
152	27.14	0.95	979	27.77	1.24	0	26.49	0.51
203	27.32	1.14	1,474		1.14	25	26.66	0.50
Station 4763; May 1; latitude 46°59' N., longitude 48°10' W.; depth 134 meters			Station 4795; May 4; latitude 45°24' N., longitude 46°40' W.; depth 3,011 meters			51	26.68	0.47
0	26.31	0.65	0	26.37	0.86	76	26.70	0.65
30	26.39	0.98	50	26.55	0.59	102	26.72	0.74
58	26.46	1.36	75	26.84	0.81	151	26.76	0.70
88	26.76	1.02	101	27.03	1.01	202	26.81	0.75
116	26.93	1.04	150	27.20	1.27	304	27.01	1.36
Station 4764; May 1; latitude 46°59' N., longitude 48°10' W.; depth 134 meters			200	27.41	1.44	426	27.28	1.46
0	26.31	0.65	301	27.54	1.48	639	27.62	1.32
30	26.39	0.98	395	27.63	1.28	854	27.71	1.45
58	26.46	1.36	602	27.74	1.23	1,069	27.75	1.14
88	26.76	1.02	809	27.76	1.28	1,608	27.83	1.31
116	26.93	1.04	1,015	27.77	1.21			
Station 4765; May 1; latitude 46°59' N., longitude 48°10' W.; depth 134 meters			1,538	27.82	1.30			
0	26.31	0.65						
30	26.39	0.98						
58	26.46	1.36						
88	26.76	1.02						
116	26.93	1.04						

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{ga/L}$	Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{ga/L}$	Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{ga/L}$
Station 4800; May 5; latitude 44°26.5' N., longitude 45°54' W.; depth 3,658 meters			Station 4804; May 6; latitude 44°56' N., longitude 48°32' W.; depth 1,518 meters			Station 4810; May 7; latitude 44°14' N., longitude 49°23' W.; depth 93 meters		
0	26.17	0.51	0	26.62	0.74	0	26.26	0.72
19	26.42	0.48	24	26.71	0.78	25	26.46	1.08
38	26.65	0.64	49	27.21	1.66	51	26.54	1.00
58	26.65	0.49	97	27.45	1.48	76	26.72	0.93
76	26.76	0.77	146	27.50	1.41			
115	26.93	1.20	195	27.60	1.55			
154	26.91	1.35	292	27.67	1.58			
230	27.19	1.13	338	27.71	1.73			
260	27.09	1.33	513	27.74	1.50			
388	27.49	1.42	690	27.77	1.55			
515	27.64	1.46	880	27.78	1.58			
658	27.72	1.45	1,385	27.79	1.64			
1,038	27.76	1.48						
Station 4801; May 5; latitude 44°36.5' N., longitude 46°40' W.; depth 3,749 meters			Station 4805; May 6; latitude 44°57' N., longitude 48°45' W.; depth 1,371 meters			Station 4811; May 7; latitude 44°13.5' N., longitude 49°19' W.; depth 201 meters		
0	26.20	0.72	0	26.55	0.80	0	26.25	0.71
28	26.46	0.77	27	26.80	1.10	25	26.44	0.68
55	26.64	0.73	52	26.97	1.46	49	26.52	0.99
84	27.04	0.99	79	27.04	1.00	74	26.70	0.94
111	27.18	1.07	104	27.10	0.93	98	26.81	0.95
167	27.42	1.40	157	27.29	0.98	147	27.04	0.86
223	27.51	1.42	210	27.46	1.09			
334	27.64	1.43	314	27.58	1.01			
404	27.67	1.32	442	27.70	1.07			
632	27.74	1.34	658	27.74	0.97			
877	27.77	1.22	871	27.75	1.18			
1,098	27.78	1.28	1,092		1.14			
1,654	27.80	1.53						
Station 4802; May 6; latitude 44°44' N., longitude 47°18' W.; depth 3,658 meters			Station 4806; May 6; latitude 44°58.5' N., longitude 48°59' W.; depth 604 meters			Station 4812; May 7; latitude 44°12' N., longitude 49°15' W.; depth 713 meters		
0	26.34	0.94	0	26.32	0.73	0	26.28	0.73
24	26.55	1.02	24	26.38	0.59	25	26.54	0.94
49	26.57	1.04	48	26.63	1.04	51	26.73	1.07
72	26.76	1.21	72	26.75	1.38	76	26.92	0.97
97	27.12	1.26	96	26.82	1.46	101	26.98	0.99
145	27.39	1.41	144	26.98	0.93	152	27.10	0.93
193	27.57	1.58	193	27.17	1.23	203	27.13	0.99
290	27.64	1.62	289	27.44	0.93	304	27.38	0.97
376	27.71	1.50	391	27.60	1.27	399	27.58	1.06
560	27.71	1.50	583	27.68	1.07	593	27.71	0.97
742	27.76	1.48						
932	27.76	1.54						
1,422	27.78	1.49						
Station 4803; May 6; latitude 44°52.5' N., longitude 48°04' W.; depth 2,834 meters			Station 4807; May 6; latitude 44°59.5' N., longitude 49°08' W.; depth 77 meters			Station 4813; May 7; latitude 44°10' N., longitude 49°07' W.; depth 1,582 meters		
0	26.56	0.94	0	26.17	0.76	0	26.27	0.66
24	26.82	1.41	23	26.38	1.00	25	26.56	0.97
49	27.03	1.33	47	26.65	1.03	50	26.77	1.07
73	27.25	1.21	70		1.24	75	26.92	0.96
98	27.39	1.49				99	27.04	1.02
146	27.46	1.35				149	27.10	1.03
195	27.57	1.38				199	27.22	1.06
293	27.66	1.44				298	27.44	1.02
389	27.71	1.42				404	27.62	1.00
584	27.74	1.66				600	27.71	1.24
778	27.76	1.42				792	27.74	1.12
991	27.78	1.35				990	27.76	1.17
1,560	27.80	1.66				1,484	27.77	1.16
Station 4804; May 6; latitude 44°59' N., longitude 49°24' W.; depth 70 meters			Station 4808; May 6; latitude 44°59' N., longitude 49°24' W.; depth 70 meters			Station 4814; May 7; latitude 44°07' N., longitude 48°52' W.; depth 2,615 meters		
0	26.20	0.61	0	26.17	0.72	0	26.27	0.59
25	26.22	0.70	26	26.42	1.10	24	26.56	0.95
50	26.43	1.41	46	26.46	1.43	48	26.77	1.08
Station 4809; May 6; latitude 44°16' N., longitude 49°29' W.; depth 53 meters						72	26.93	1.08
0	26.17	0.61				96	27.02	0.96
25	26.22	0.70				144	27.14	1.01
50	26.43	1.41				193	27.36	1.14
Station 4809; May 6; latitude 44°16' N., longitude 49°29' W.; depth 53 meters						289	27.53	1.12
0	26.17	0.61				368	27.65	1.30
25	26.22	0.70				554	27.71	1.25
50	26.43	1.41				741	27.75	1.27
Station 4809; May 6; latitude 44°16' N., longitude 49°29' W.; depth 53 meters						934	27.77	1.22
0	26.17	0.61				1,429	27.79	1.14
25	26.22	0.70						
46	26.46	1.43						

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	σ_t	Total P $\mu\text{g}/\text{L}$	Depth meters	σ_t	Total P $\mu\text{g}/\text{L}$	Depth meters	σ_t	Total P $\mu\text{g}/\text{L}$
Station 4815; May 7; latitude 43°58' N., longitude 48°21' W.; depth 3,475 meters			Station 4819; May 8; latitude 43°20.5' N., longitude 45°33' W.; depth 4,572 meters			Station 4823; May 9; latitude 42°58.5' N., longitude 47°21' W.; depth 3,731 meters		
0	26.22	0.59	0	26.30	0.43	0	26.24	0.47
25	26.54	0.62	28	26.30	0.39	26	26.24	0.39
51	26.94	0.93	56	26.39	0.41	51	26.47	0.39
76	27.15	1.00	84	26.67	0.67	77	26.66	0.59
102	27.26	1.04	111	26.74	0.68	103	26.75	0.73
152	27.44	1.13	167		0.55	153	26.83	0.83
204	27.53	1.10	223		0.94	205	26.90	0.79
306	27.65	1.27	334	27.33	1.39	308	27.18	1.50
412	27.70	1.24	400	27.45	1.42	365	27.26	1.51
615	27.74	1.13	584	27.65	1.12	549	27.56	1.41
816	27.76	1.11	756	27.72	1.25	737	27.71	1.31
1,022	27.78	1.15	954	27.76	1.22	937	27.75	1.29
1,544	27.80	1.21	1,467	27.80	1.25	1,462	27.78	1.18
Station 4816; May 7; latitude 43°48' N., longitude 47°43' W.; depth 3,841 meters			Station 4820; May 8; latitude 42°52.5' N., longitude 45°53' W.; depth 4,663 meters			Station 4824; May 9; latitude 43°09.5' N., longitude 48°05' W.; depth 3,292 meters		
0	26.13	0.54	0	26.01	0.43	0	25.90	0.49
22	26.71	0.60	26	26.03	0.53	27	26.75	0.65
43	26.78	0.58	52	26.49	0.44	53	26.84	0.73
65	26.83	0.69	78	26.57	0.56	80	26.89	0.82
87	26.84	0.65	104	26.58	0.49	105	27.05	1.09
130	26.85	0.67	156	26.59	0.54	159	27.22	0.84
173	27.12	1.13	208	26.60	0.48	212	27.37	1.40
260	27.35	1.33	311		0.86	317	27.57	1.08
296	27.40	1.36	415	26.73	1.17	404	27.63	1.25
451	27.61	1.33	625	27.24	2.27	606	27.72	1.26
610	27.71	1.27	836	27.56	2.04	811	27.76	1.28
777	27.75	1.26	1,646	27.70	1.86	1,017	27.76	1.25
1,219	27.77	1.21	1,572	27.78	1.79	1,540	27.81	1.29
Station 4817; May 7; latitude 43°36.5' N., longitude 46°59' W.; depth 4,490 meters			Station 4821; May 8; latitude 42°28' N., longitude 46°09' W.; depth 4,572 meters			Station 4825; May 9; latitude 43°20' N., longitude 48°50' W.; depth 1,920 meters		
0	26.27	0.53	0	26.01	0.35	0	26.23	0.66
25	26.40	0.67	26	26.06	0.38	24	26.46	0.66
50	26.63	0.66	52		0.36	50	26.97	1.00
75	26.86	0.90	78	26.42	0.36	74	27.25	1.10
99	27.01	0.95	103	26.46	0.38	99	27.32	1.19
150		0.85	156	26.53	0.51	148	27.47	1.25
200	27.25	1.37	207	26.64	0.57	198	27.55	1.17
299	27.45	1.40	310	26.78	0.68	297	27.64	1.10
302	27.47	1.42	421	26.96	0.97	393	27.68	1.21
499	27.65	1.27	630	27.32	1.49	588	27.71	1.17
698	27.73	1.18				781	27.74	1.19
903	27.75	1.38				979	27.75	1.14
1,433	27.77	1.41				1,483	27.78	1.20
Station 4818; May 8; latitude 43°28' N., longitude 46°14' W.; depth 4,572 meters			Station 4822; May 8; latitude 42°47.5' N., longitude 46°40' W.; depth 4,207 meters			Station 4826; May 9; latitude 42°37.5' N., longitude 49°01' W.; depth 2,286 meters		
0	26.01	0.52	0	25.97	0.49	0	26.22	0.54
24	26.24	0.59	26	26.21	0.51	24	26.57	0.78
48	26.49	0.67	52	26.42	0.59	49	26.85	0.93
71	26.61	0.83	78	26.49	0.68	73	27.12	1.00
95	26.96	0.98	104	26.54	0.83	98	27.19	0.92
142	27.19	0.95	157	26.69	1.00	145	27.34	1.04
190	27.41	1.25	208	26.82	1.23	194	27.49	1.09
285	27.56	1.31	312	26.93	1.47	292	27.59	1.17
316	27.60	1.42	478	26.83	1.20	353	27.63	1.26
486	27.68	1.31	556	27.29	2.21	529	27.69	1.64
663	27.72	1.35	660	27.56	2.20	703	27.72	1.13
849	27.76	1.21	844	27.70	1.78	889	27.74	1.27
1,349	27.79	1.28	1,336	27.78	1.66	1,370	27.77	1.24

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	σ_{θ}	Total P $\mu\text{g}/\text{L}$	Depth meters	σ_{θ}	Total P $\mu\text{g}/\text{L}$	Depth meters	σ_{θ}	Total P $\mu\text{g}/\text{L}$
Station 4827; May 9; latitude 42°24.5' N., longitude 48°33' W.; depth 3,109 meters			Station 4831; May 10; latitude 41°31' N., longitude 48°54' W.; depth 3,200 meters			Station 4835; May 11; latitude 42°02' N., longitude 50°13' W.; depth 3,564 meters		
0	25.68	0.80	0	25.54	0.52	0	25.65	0.12
27	26.79	0.79	27	26.38	0.69	23	26.35	0.66
53	27.00	1.39	53	26.73	1.06	46	26.54	0.98
81	27.11	1.28	80	26.98	1.07	69	26.89	1.00
107	27.16	1.24	105	27.18	1.09	92	27.01	1.04
161	27.26	1.33	159	27.36	1.23	137	27.19	1.14
215	27.35	1.42	212	27.48	1.40	182	27.35	1.29
322	27.56	1.50	317	27.60	1.31	274	27.55	1.39
257	27.47	1.41	402	27.65	1.38	345	27.57	1.40
408	27.67	1.40	599	27.73	1.34	527	27.67	1.35
576	27.72	1.26	795	27.77	1.26	716	27.72	1.21
755	27.76	1.34	998	27.77	1.22	907	27.76	1.31
1,265	27.75	1.28	1,511	27.79	1.22	1,402	27.78	1.24
Station 4828; May 10; latitude 41°59.5' N., longitude 48°02' W.; depth 3,658 meters			Station 4832; May 11; latitude 42°00' N., longitude 49°27' W.; depth 3,011 meters			Station 4836; May 11; latitude 42°25.5' N., longitude 50°10' W.; depth 1,929 meters		
0	25.63	0.61	0	26.14	0.81	0	26.14	1.44
25	26.28	0.65	23	26.88	0.89	25	26.62	0.78
50	26.72	0.88	45	26.97	0.94	50	26.86	1.23
75	26.94	0.93	68	27.13	1.05	75	26.99	1.12
101	27.11	1.00	89	27.26	1.24	99	27.08	1.12
150	27.26	1.17	134	27.35	1.31	148	27.25	1.16
200	27.37	1.32	179	27.53	1.41	198	27.37	1.25
301	27.55	1.39	268	27.55	1.39	297	27.57	1.43
392	27.63	1.36	305	27.68	1.32	369	27.60	1.43
589	27.72	1.35	515	27.74	1.35	555	27.67	1.29
788	27.76	1.22	722	27.77	1.09	743	27.73	1.35
986	27.78	1.18	930	27.77	1.05	938	27.75	1.34
1,490	27.80	1.17	1,452	27.79	1.05	1,441	27.77	1.38
Station 4829; May 10; latitude 41°34.5' N., longitude 47°14' W.; depth 4,207 meters			Station 4833; May 11; latitude 40°59' N., longitude 50°15' W.; depth 3,603 meters			Station 4837; May 11-12; latitude 42°45.5' N., longitude 50°09' W.; depth 732 meters		
0	25.95	0.62	0	24.25	0.22	0	26.27	0.51
25	26.54	0.70	25	25.82	0.14	25	26.39	0.60
50	26.65	0.86	49	26.16	0.18	49	26.59	0.67
75	26.71	1.12	74	26.31	0.10	74	26.70	1.01
99	26.78	0.79	98	26.36	0.16	98	26.80	1.07
149	26.86	0.91	148	26.38	0.16	146	27.01	1.03
199	27.00	1.07	197	26.40	0.23	196	27.17	1.08
298	27.19	1.65	296	26.43	0.22	294	27.38	1.05
284	27.16	1.71	307	26.42	0.32	375	27.47	1.15
443	27.52	1.68	464	27.10	0.78	576	27.71	1.11
612	27.68	1.53	624	27.10	1.34			
787	27.73	1.50	782	27.47	1.59			
1,265	27.78	1.39	1,180	27.77	1.28			
Station 4830; May 10; latitude 40°59' N., longitude 48°28' W.; depth 3,011 meters			Station 4834; May 11; latitude 41°30' N., longitude 50°09' W.; depth 3,779 meters			Station 4838; May 12; latitude 42°49.5' N., longitude 50°10' W.; depth 287 meters		
0	26.18	1.03	0	25.69	0.14	0	26.16	0.59
54	26.54	0.78	26	25.92	0.24	24	26.20	0.62
81	26.79	0.76	51	26.13	0.30	49	26.52	0.92
108	26.84	0.93	76	26.35	0.47	73	26.69	1.11
163	26.94	1.15	102	26.57	0.45	97	26.81	1.09
217	27.09	1.21	152	26.70	0.73	146	26.96	1.00
325	27.36	1.42	203	26.81	0.86	194	27.18	1.15
417	27.50	1.65	305	26.98	1.07	243	27.26	1.20
621	27.68	1.36	401	27.15	1.47			
823	27.73	1.22	595	27.51	1.32	Station 4839; May 12; latitude 42°58' N., longitude 50°11' W.; depth 88 meters		
1,030	27.78	1.29	787	27.69	1.35	0	26.00	0.66
1,550	27.81	1.25	996	27.75	1.28	21	26.24	0.66
			1,540	27.78	1.24	43	26.46	1.02
						64	26.64	1.06

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	σ_{10}	Total P $\mu\text{g}/\text{L}$
Station 4840; May 12; latitude 43°11.5' N., longitude 50°17' W.; depth 68 meters		
0	25.45	0.87
22	25.57	0.89
43	26.27	1.31
Station 4970; July 15; latitude 50°00' N., longitude 49°00' W., depth 1,847 meters		
0	25.13	0.55
25	27.47	1.07
50	27.63	1.42
76	27.67	1.37
101	27.71	1.38
151	27.72	1.17
202	27.73	1.38
303	27.76	1.38
403	27.76	1.37
604	27.77	1.43
803	27.78	1.48
1,004	27.77	1.49
1,508	27.80	1.43
Station 4971; July 17; latitude e 53°43' N., longitude 55°48' W., depth 110 meters		
0	21.66	0.57
25	25.74	0.79
49	26.35	1.27
74	26.39	1.41
98	26.43	1.43
Station 4972; July 17; 53°52' N., longitude 55°32' W.; depth 215 meters		
23	26.18	0.87
47	26.44	1.28
70	26.53	1.30
93	26.58	1.27
140	26.86	1.38
177	27.26	1.31
Station 4973; July 17; latitude 53°55.5' N., longitude 55°26' W.; depth 170 meters		
0	24.70	0.66
25	26.25	0.88
49	26.54	1.40
74	26.72	1.40
98	26.89	1.21
147	27.16	1.21
Station 4974; July 17; latitude 54°05.5' N., longitude 55°07' W.; depth 165 meters		
0	24.58	0.70
25	26.35	0.99
51	26.77	1.38
76	26.91	1.32
101	27.03	1.24
147	27.13	1.39

Depth meters	σ_{10}	Total P $\mu\text{g}/\text{L}$
Station 4975; July 17; latitude 54°11' N., longitude 54°55' W.; depth 165 meters		
0	24.60	0.73
25	26.46	0.91
50	26.65	1.31
75	26.84	1.26
101	27.04	1.30
151	27.31	1.34
Station 4976; July 17; latitude 54°30.5' N., longitude 54°22' W.; depth 224 meters		
0	24.61	0.57
25	26.47	1.38
50	26.65	1.21
76	26.77	1.32
101	26.89	1.35
151	27.10	1.47
202	27.29	1.28
Station 4977; July 17; latitude 54°45' N., longitude 53°51' W.; depth 320 meters		
0	25.74	1.84
23	26.75	0.89
45	27.07	0.84
68	27.25	0.95
90	27.34	1.09
135	27.48	1.33
180	27.50	1.44
270	27.55	1.23
Station 4978; July 17; latitude 54°51' N., longitude 53°34' W.; depth 619 meters		
0	26.07	0.78
18	27.18	0.90
37	27.39	1.21
55	27.44	1.12
74	27.51	1.27
111	27.57	1.39
147	27.62	1.09
221	27.72	1.35
342	27.73	1.45
533	27.75	1.29
Station 4979; July 17; latitude 54°55' N., longitude 53°23' W., depth 1,463 meters		
0	26.37	0.82
25	27.19	0.96
51	27.45	1.20
76	27.61	1.31
102	27.65	1.33
152	27.72	1.38
203	27.71	1.34
305	27.74	1.46
352	27.75	1.42
532	27.75	1.55
713	27.77	1.54
897	27.76	1.22
1,370	27.77	1.23

Depth meters	σ_{10}	Total P $\mu\text{g}/\text{L}$
Station 4980; July 17; latitude 55°00' N., longitude 53°11' W.; depth, 2,067 meters		
0	26.40	0.48
23	27.00	0.55
46	27.54	1.10
69	27.67	1.04
92	27.73	1.15
138	27.73	1.28
184	27.74	1.21
370	27.75	1.26
557	27.76	1.10
746	27.76	1.08
935	27.76	1.09
1,419	27.78	1.17
1,916	27.79	1.17
	27.82	0.95
Station 4981; July 17-18; latitude 55°10.5' N., longitude 52°51' W.; depth 2,871 meters		
0	26.67	0.47
25	26.88	0.43
50	27.57	0.90
74	27.70	0.94
99	27.70	0.98
149	27.76	1.03
198	27.77	1.13
297	27.77	1.13
379	27.77	0.98
571	27.78	1.03
762	27.80	1.01
956	27.80	0.99
1,446	27.80	1.06
1,945	27.87	1.10
2,504	27.91	1.30
2,792	27.93	1.17
Station 4982; July 18; latitude 55°30' N., longitude 52°19' W.; depth 3,200 meters		
0	26.64	0.55
25	27.28	1.17
49	27.64	1.26
74	27.70	1.37
98	27.73	1.52
147	27.75	1.38
197	27.76	1.22
295	27.77	1.18
394	27.78	1.22
592	27.78	1.31
790	27.77	0.98
989	27.79	1.13
1,475	27.80	1.34
1,954	27.80	1.08
2,416	27.88	1.23
2,893	27.90	1.19
3,038	27.94	0.66

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	σ_{θ}	Total P $\mu\text{g/L}$	Depth meters	σ_{θ}	Total P $\mu\text{g/L}$	Depth meters	σ_{θ}	Total P $\mu\text{g/L}$
Station 4983 July 18; latitude 55°55.5' N., longitude 51°34' W.; depth 3,402 meters			Station 4986; July 19; latitude 57°34.5' N., longitude 48°04' W.; depth 3,347 meters			Station 4989; July 20; latitude 59°00' N., longitude 45°16' W.; depth 2,286 meters		
0	26.59	1.07	0	26.89	0.82	0	27.15	1.10
25	26.76	0.69	25	27.25	0.80	25	27.34	1.05
49	27.29	1.00	52	27.65	1.13	49	27.53	1.16
74	27.42	1.25	77	27.72	1.42	74	27.65	1.31
99	27.48	1.16	104	27.71	1.41	98	27.71	1.49
148	27.59	1.16	154	27.75	1.34	147	27.75	1.36
197	27.62	1.28	206	27.76	1.34	196	27.75	1.27
296	27.72	1.34	310	27.75	1.42	294	27.74	1.26
398	27.76	1.33	513	27.75	1.38	393	27.76	1.25
596	27.76	1.20	719	27.75	1.31	591	27.77	1.29
792	27.78	1.21	924	27.77	1.41	789	27.78	1.29
988	27.78	1.30	1,129	27.78	1.30	988	27.79	1.31
1,486	27.81	1.42	1,646	27.77	1.26	1,492	27.82	1.47
1,987	27.85	1.31	2,164	27.81	1.30	2,002	27.88	1.47
2,335	27.84	1.32	2,453	27.83	1.37	2,253	27.90	1.17
2,801	27.90	1.32	2,937	27.90	1.34			
3,126	27.91	1.18	3,227	27.93	1.09			
Station 4984; July 18; latitude 56°30.5' N., longitude 50°25' W.; depth 3,530 meters			Station 4987; July 19; latitude 58°05.5' N., longitude 47°01' W.; depth 3,054 meters			Station 4990; July 20; latitude 59°14.5' N., longitude 44°54' W.; depth 1,957 meters		
0	26.84	0.64	0	26.94	0.80	0	27.09	0.88
26	27.12	1.02	25	27.14	0.91	25	27.16	1.01
51	27.56	1.30	50	27.34	0.95	50	27.54	1.27
77	27.71	1.44	75	27.68	1.31	76	27.63	1.39
103	27.71	1.44	100	27.71	1.48	101	27.67	1.47
153	27.76	1.48	150	27.73	1.47	151	27.70	1.49
204	27.77	1.47	199	27.73	1.34	202	27.71	1.35
307	27.78	1.25	299	27.74	1.27	303	27.75	1.42
310	27.77	1.35	406	27.75	1.32	404	27.74	1.26
495	27.78	1.45	609	27.76	1.20	605	27.76	1.45
700	27.77	1.36	812	27.78	1.28	806	27.77	1.36
924	27.77	1.41	1,015	27.79	1.37	1,005	27.78	1.27
1,427	27.77	1.25	1,494	27.81	1.37	1,505	27.79	1.47
1,956	27.79	1.32	2,044	27.83	1.28	1,862	27.85	1.02
2,532	27.82	1.34	2,490	27.88	1.37			
3,016	27.88	1.27	2,986	27.92	1.33			
3,405	27.91	1.32						
Station 4985; July 19; latitude 57°02' N., longitude 49°02' W.; depth 3,475 meters			Station 4988; July 20; latitude 58°37.5' N., longitude 45°57' W.; depth 2,505 meters			Station 4991; July 20; latitude 59°21.5' N., longitude 44°41' W.; depth 1,097 meters		
0	26.67	0.74	0	27.06	0.98	0	26.91	0.97
24	27.03	0.85	25	27.32	1.02	24	27.22	1.14
49	27.46	1.23	51	27.50	1.16	49	27.38	1.12
74	27.65	1.34	76	27.71	1.27	74	27.49	1.51
99	27.67	1.52	101	27.72	1.39	99	27.57	1.18
148	27.71	1.85	152	27.74	1.35	148	27.69	1.30
197	27.72	1.39	203	27.74	1.39	197	27.69	1.27
296	27.75	1.40	304	27.75	1.36	296	27.71	1.18
379	27.75	1.34	376	27.77	1.24	429	27.71	1.20
568	27.75	1.38	565	27.77	1.44	635	27.72	1.23
758	27.75	1.38	755	27.77	1.30	838	27.74	1.34
948	27.77	1.36	946	27.78	1.29	1,036	27.76	1.35
1,442	27.79	1.20	1,431	27.78	1.33			
1,948	27.80	1.42	1,926	27.84	1.30			
2,552	27.85	1.38	2,448	27.87	1.18			
3,040	27.89	1.40						
3,429	27.92	0.99						
						Station 4992; July 20; latitude 59°31.5' N., longitude 44°31' W.; depth 179 meters		
						0	24.90	0.44
						23	25.14	0.58
						47	26.19	0.71
						70	26.84	1.15
						94	27.21	1.04
						140	27.51	1.10
						159	27.60	1.09

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$	Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$	Depth meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$
Station 4993; July 20; latitude 59°34.5' N., longitude 44°23' W.; depth 153 meters			Station 4994; July 20; latitude 59°36' N., longitude 44°11' W.; depth 165 meters					
0	25.09	0.40	0	25.03	0.59			
25	25.42	0.49	25	25.22	0.63			
51	26.42	0.74	51	25.95	0.76			
76	26.65	0.95	76	26.45	0.99			
101	27.01	0.93	101	26.91	1.02			
147	27.19	1.10	152	27.41	1.42			

TOTAL PHOSPHORUS DATA COLLECTED IN 1953

Depth meters	σ_t	Total P $\mu\text{g/L}$	Depth meters	σ_t	Total P $\mu\text{g/L}$	Depth meters	σ_t	Total P $\mu\text{g/L}$
Station 5279; July 16; latitude 53°43' N., longitude 55°48' W.; depth 112 meters			Station 5284; July 16; latitude 54°31' N., longitude 54°24' W.; depth 225 meters			Station 5288; July 16; latitude 55°04' N., longitude 53°17' W.; depth 2,195 meters		
0-----	20.35	1.11	0-----	25.24	0.66	0-----	26.87	0.47
26-----	25.74	0.66	25-----	26.32	0.80	25-----	27.23	0.52
51-----	26.02	0.66	50-----	26.57	0.98	50-----	27.60	0.71
77-----	26.14	0.83	76-----	26.73	1.00	74-----	27.64	0.77
97-----	26.20	0.92	101-----	26.90	0.87	99-----	27.69	1.00
			151-----	27.10	0.94	149-----	27.72	1.02
			202-----	27.25	1.07	198-----	27.73	1.01
						297-----	27.75	1.05
Station 5280; July 16; latitude 53°49.5' N., longitude 55°32' W.; depth 218 meters			Station 5285; July 16; latitude 54°48' N., longitude 53°54' W.; depth 327 meters			382-----	27.74	1.00
0-----	24.26	0.49	0-----	25.04	0.69	597-----	27.76	1.00
26-----	25.92	0.59	25-----	26.67	0.68	812-----	27.77	0.95
52-----	26.32	0.92	50-----	27.10	0.99	1,031-----	27.79	0.98
78-----	26.48	1.01	75-----	27.26	0.87	1,495-----	27.79	1.07
104-----	26.58	1.01	101-----	27.31	0.94	1,963-----	27.81	1.09
156-----	26.77	0.95	151-----	27.51	1.01			
198-----	27.00	1.06	201-----	27.56	1.02			
			302-----	27.68	1.01			
Station 5281; July 16; latitude 53°53' N., longitude 55°26' W.; depth 181 meters			Station 5286; July 16; latitude 54°53' N., longitude 53°40' W.; depth 631 meters			0-----	26.92	0.67
0-----	24.34	0.47	0-----	25.75	0.63	25-----	27.22	0.68
25-----	25.95	0.53	25-----	27.11	0.79	50-----	27.51	0.85
51-----	26.31	0.88	50-----	27.25	0.82	75-----	27.65	1.00
76-----	26.48	1.08	75-----	27.36	0.88	99-----	27.68	1.04
101-----	26.64	1.05	100-----	27.43	0.88	149-----	27.72	1.14
152-----	27.00	1.14	150-----	27.50	0.88	199-----	27.73	1.05
			201-----	27.59	0.91	298-----	27.75	1.15
Station 5282; July 16; latitude 54°03' N., longitude 55°04' W.; depth 161 meters			301-----	27.66	1.05	397-----	27.75	1.17
0-----	25.17	0.60	393-----	27.69	1.04	621-----	27.77	1.10
26-----	26.02	0.68	595-----	27.71	1.06	859-----	27.78	1.15
51-----	26.46	1.06				1,074-----	27.78	1.14
77-----	26.59	1.01				1,551-----	27.79	1.22
103-----	26.74	0.76				2,029-----	27.83	1.16
144-----	26.93	1.00				2,431-----	27.86	1.16
						2,730-----	27.91	1.11
Station 5283; July 16; latitude 54°14' N., longitude 54°56' W.; depth 174 meters			Station 5287; July 16; latitude 54°59' N., longitude 53°26' W.; depth 1,582 meters			Station 5290; July 17; latitude 55°26' N., longitude 52°30' W.; depth 3,182 meters		
0-----	25.24	0.58	0-----	26.81	0.58	0-----	26.73	0.74
25-----	25.68	0.55	25-----	27.10	0.53	27-----	27.03	0.58
51-----	26.39	0.64	51-----	27.41	0.64	53-----	27.50	1.05
76-----	26.55	1.05	76-----	27.57	0.82	80-----	27.63	1.11
101-----	26.71	1.05	102-----	27.61	0.93	106-----	27.68	1.29
152-----	26.97	1.00	153-----	27.67	0.95	161-----	27.72	1.29
			204-----	27.70	0.95	214-----	27.74	1.21
			306-----	27.74	0.99	320-----	27.74	1.28
			369-----	27.75	1.06	308-----	27.75	1.30
			590-----	27.76	1.03	497-----	27.76	1.12
			798-----	27.77	1.08	706-----	27.78	1.20
			1,010-----	27.77	1.06	940-----	27.78	1.15
			1,542-----	27.78	1.03	1,374-----	27.78	1.06
						1,536-----	27.79	1.12
						1,706-----	27.79	0.98
						2,136-----	27.83	1.13
						2,537-----	27.86	1.04

TOTAL PHOSPHORUS DATA COLLECTED IN 1952—Continued

Depth meters	σ_t	Total P $\mu\text{ga/L}$	Depth meters	σ_t	Total P $\mu\text{ga/L}$	Depth meters	σ_t	Total P $\mu\text{ga/L}$
Station 5291; July 17-18; latitude 55°58' N., longitude 51°52' W.; depth 3,365 meters			Station 5294; July 19; latitude 57°30' N., longitude 48°23' W.; depth 3,402 meters			Station 5297; July 20; latitude 58°59.5' N., longitude 45°31' W.; depth 2,469 meters		
0	26.80	0.60	0	27.19	1.02	0	27.21	0.82
27	26.80	0.54	24	27.21	1.08	25	27.24	0.82
53	27.41	0.83	47	27.22	1.10	50	27.38	0.87
80	27.53	0.97	71	27.41	1.15	76	27.55	0.95
106	27.61	1.03	94	27.60	1.27	101	27.62	1.22
160	27.68	1.18	142	27.66	1.18	151	27.63	1.18
214	27.73	0.98	189		1.23	201	27.67	1.13
320	27.74	1.24	283	27.72	1.39	302	27.68	1.15
490	27.77	1.15	321	27.73	1.34	403	27.71	1.29
776	27.78	1.09	499	27.74	1.29	560	27.71	1.25
1,080	27.79	1.24	685	27.73	1.34	704	27.74	1.18
1,310	27.79	1.02	874	27.75	1.24	855	27.76	0.92
1,789	27.79	1.22	1,328	27.76	1.40	1,294	27.77	1.20
2,270	27.83	1.13	1,837	27.78	1.36	1,753	27.81	0.97
2,354	27.83	1.20	1,922	27.79	1.49	2,238	27.87	1.04
2,979	27.88	1.14	2,363	27.83	1.38			
3,264	27.91	1.06	2,770	27.87	1.31			
Station 5292; July 18; latitude 56°29' N., longitude 50°42' W.; depth 3,548 meters			Station 5295; July 19; latitude 58°05' N., longitude 47°14' W.; depth 3,237 meters			Station 5298; July 20; latitude 59°13' N., longitude 44°58' W.; depth 1,975 meters		
0	26.91	0.70	0	27.15	1.06	0	27.08	0.87
23	26.92	0.73	27	27.19	1.04	19	27.13	0.91
45	26.93	0.97	53	27.48	1.14	37	27.21	0.87
68	27.22	0.90	80	27.58	1.04	56	27.36	0.94
90	27.51	1.10	106	27.65	1.35	74	27.42	0.96
135	27.59	1.18	160	27.68	1.36	111	27.53	1.00
181	27.64	1.19	213	27.69	1.35	148	27.56	1.05
271	27.70	1.17	319	27.72	1.17	222	27.58	1.12
381	27.74	1.26	423	27.75	1.31	311	27.60	1.19
598	27.75	1.16	647	27.74	1.27	456	27.65	1.09
819	27.77	1.24	875	27.75	1.46	600	27.68	1.24
1,042	27.78	1.24	1,103	27.75	1.32	758	27.71	1.19
1,511	27.78	1.16	1,582	27.78	1.33	1,190	27.75	1.18
1,987	27.80	1.14	2,060	27.82	1.35	1,731	27.79	1.19
2,536	27.84	1.03	2,615	27.87	1.29			
3,012	27.89	1.13	3,063	27.92	1.25			
3,450	27.91	1.05						
Station 5293; July 19; latitude 56°57.5' N., longitude 49°33' W.; depth 3,603 meters			Station 5296; July 20; latitude 58°39' N., longitude 46°12' W.; depth 2,698 meters			Station 5299; July 20; latitude 59°19.5' N., longitude 44°30' W.; depth 1,188 meters		
0	27.00	0.67	0	27.08	0.84	0	27.03	0.90
25	27.00	0.66	25	27.15	0.87	28	27.10	0.82
50	27.11	0.79	50	27.32	0.90	55	27.25	0.80
75	27.55	1.11	75	27.52	1.01	82	27.36	0.97
100	27.59	0.80	100	27.64	1.23	109	27.39	1.01
148	27.67	1.15	150	27.63	1.19	165	27.49	1.11
198	27.69	1.12	200	27.71	1.18	219	27.54	1.17
298	27.74	1.17	300	27.74	1.19	328	27.59	1.14
2,436	27.81	1.30	400	27.74	1.16	432	27.63	1.33
2,859	27.85	1.29	625	27.76	1.15	649	27.66	1.37
3,325	27.89	1.13	854		1.12	868	27.72	1.44
			1,080	27.77	1.10	1,087	27.75	1.46
			1,581	27.78	1.10			
			2,038	27.82	1.14			
			2,517	27.89	1.03			
						Station 5300; July 20; latitude 59°33' N., longitude 44°07' W.; depth 171 meters		
						0	25.54	0.87
						29	25.69	0.79
						53	25.92	0.80
						87	26.42	0.80
						115	26.88	0.95
						173	27.32	0.90

U. S. TREASURY DEPARTMENT - - - COAST GUARD

BULLETIN No. 40

INTERNATIONAL ICE OBSERVATION
AND ICE PATROL SERVICE IN THE
NORTH ATLANTIC OCEAN - [^{SEASON of}
1954]

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COAST GUARD

Bulletin No. 40

INTERNATIONAL
ICE OBSERVATION AND ICE PATROL
SERVICE

IN THE
NORTH ATLANTIC OCEAN



A. J. BUSH
J. E. MURRAY
FLOYD M. SOULE



CG-188-9

Season of 1954

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1955

UNITED STATES COAST GUARD

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U. S. COAST GUARD
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WASHINGTON 25, D. C.



WASHINGTON, D. C., 26 April 1955.

Transmitted herewith is Bulletin No. 40, International Ice Observation and Ice Patrol Service in the North Atlantic Ocean, Season of 1954.

A handwritten signature in cursive script, reading "A. C. Richmond".

A. C. RICHMOND
Vice Admiral, U. S. Coast Guard
Commandant

Dist. (SDL No. 60)

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List 133

ABSTRACT

The authority for, mission and method of carrying out the mission of the International Ice Patrol are described.

The forces assigned to Commander, International Ice Patrol, for the 1954 ice season are listed.

Recommendations made by Commander, International Ice Patrol in connection with the North Atlantic Track Agreement tracks are set forth.

The aerial ice observation conducted by the International Ice Patrol and communications with shipping and certain agencies ashore are described in detail. Tables of statistics concerning these operations are presented.

Ice conditions during 1954 in the waters off Newfoundland are portrayed. Ice reports received by the International Ice Patrol are shown in tabular form and also by means of monthly ice charts. The 1954 ice season in the Grand Banks area was marked by a return to fairly average berg conditions after three successive light ice years. About 312 bergs drifted south of the 48th parallel during the season as compared with 404, the average annual number for the period 1900-53. With respect to pack ice the season was briefer than normal, and the pack did not reach south of the 47th parallel at any time. In the Gulf of St. Lawrence and St. Lawrence River the pack ice broke earlier than usual. Except for the Strait of Belle Isle, all the gulf and river routes were clear by 22 April. The Strait of Belle Isle was open to all shipping on 22 June, although caution was advised because of a scattering of bergs in the strait.

The description of the berg distribution appearing under Ice Conditions 1954, is supplemented in the section on oceanography in which the surface circulation in the Grand Banks region has been discussed on the basis of four dynamic topographic surveys made between 1 April and 2 July.

The circulation in the upper 1,000 meters has been presented in greater detail based on the consideration of the volume transport, mean temperature, minimum temperature, and heat transport of the Labrador Current found during 19 occupations of 8 selected sections across that current. The values found have been compared with seasonal normals where such normals are available.

The temperature-salinity relationships characteristic of Labrador Current water, mixed water, and Atlantic Current water found in the

Grand Banks region in 1954 have been compared with the 8-year means for the period 1934-41.

Three more surveys were added to the material available for the study of the relationship between the position of the cold wall in the Grand Banks region, the strength of the Labrador Current and the strength of the North Atlantic eddy as indicated by the difference in sea level between Bermuda and Charleston. The large postwar fluctuations in the mean sea level of these stations have been noted as possible causes of the poor agreement of postwar observations with the relationship developed for the prewar observations.

The repetition of the section across the Labrador Sea from South Wolf Island to Cape Farewell has been reported upon and the exceptionally vigorous circulation noted. The absence of contributions to the West Greenland Current by the Irminger Current continued in 1954, although the heat transport of the West Greenland Current was abnormally high through more direct contributions from the North Atlantic eddy.

A group of three sections disposed in a triangular array southeast of Cape Farewell and occupied during the 1954 postseason cruise has been examined and the results presented. The southward and eastward recurvature of the Irminger Current and a part of the East Greenland Current verifies the circulation pattern deduced from the Labrador Sea section, and the separation of the Labrador Sea from the circulation east of Cape Farewell is in accord with the larger numbers of East Greenland bergs recently found in positions exceptionally far to the south-southeast of Cape Farewell.

The distribution of total phosphorus found in the section across the Labrador Sea and the Greenland triangle in 1954 has been presented and the phosphorus-density relationships have been examined, leading to the conclusion that total phosphorus is not sufficiently conservative to be useful as a water mass tracer in this region.

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FOREWORD

This bulletin is one of a series of annual reports on the International Ice Observation and Ice Patrol Service.

Authors of the section of this bulletin dealing with oceanography were Oceanographer Floyd M. Soule and Lt. J. E. Murray. The remainder was written by Lt. Comdr. A. J. Bush, USCG.

INTERNATIONAL ICE PATROL, 1954

The United States Coast Guard performed the International Ice Observation and Ice Patrol Service for 1954 in accordance with the International Convention for the Safety of Life at Sea, 1948, and the U. S. Code, Title 46, Sections 738-738d.

The mission of the International Ice Patrol to afford protection to shipping in the North Atlantic sealanes from the danger of drifting ice was again carried out by collecting ice information from all available sources, including own forces assigned, evaluating that information in the light of available oceanographic and meteorological data (to estimate ice drift and mortality rate) and disseminating to mariners up-to-date information on the ice situation and routes recommended to avoid ice. To the same end, a scientific program was conducted dealing with the distribution and drift of ice in the North Atlantic Ocean, the causes thereof, and devices for the detection and identification of ice under conditions of poor visibility.

To accomplish his mission, Commander, International Ice Patrol, Capt. G. Van A. Graves, USCG, was assigned a staff of 3 officers and 14 enlisted men; radio and landline communication facilities and office space at Argentia, Newfoundland; aircraft support provided by the United States Coast Guard Search and Rescue Group at Argentia; two patrol cutters, U. S. C. G. cutter *Acushnet* and U. S. C. G. cutter *Androscooggin*; and an oceanographic survey vessel, U. S. C. G. cutter *Evergreen*. In view of the efficiency of the aerial ice observation performed by the International Ice Patrol and the disposition of the ice, it was deemed unnecessary to have a surface patrol, and therefore the two patrol cutters remained on standby in the United States throughout the ice season.

Following past practice, a series of preseason ice reconnaissance flights was made by the United States Coast Guard Air Detachment, Argentia, Newfoundland, to determine when Commander, International Ice Patrol, should move his office and staff to Argentia and commence operations. Late in January several bergs were discovered by this reconnaissance off the east coast of Newfoundland between latitudes 48° N. and 49° N. in positions where they might soon be carried south by the Labrador Current and endanger the major transatlantic shipping lanes. On the basis of this information the International Service of Ice Observation for 1954 was begun with an ice observation flight on 6 February. Part of the International Ice Patrol

staff arrived at Argentina 9 February to establish and organize the ice patrol office and radio station. The Commander, International Ice Patrol, and the remainder of his staff arrived at Argentina 13 February. Broadcast of twice-daily ice bulletins to mariners by the United States Coast Guard Radio Argentina (NIK) was commenced on 17 February. In addition, there was initiated transmission via the teletype net of twice-daily ice reports to the United States Hydrographic Office, Washington, D. C., the Canadian Department of Transport, Halifax, N. S., and the Royal Canadian Navy Radio Station at Albro Lake, N. S., for inclusion in the ice information disseminated by those agencies.

During the 1954 ice season, the International Ice Patrol depended mainly on the following sources for ice information:

(a) Ice observation flights were made by the International Ice Patrol aircraft operating out of Argentina as frequently as weather conditions and the number of available aircraft permitted. These flights were planned to scout all the ice-infested area in the vicinity of the Grand Banks and off the east coasts of Newfoundland and Labrador as far north as was necessary to guard against the undetected encroachment of ice into the steamer tracks in use.

(b) Reports were solicited and received from ships and aircraft sighting ice. In addition to reporting any ice sighted, all ships between latitudes 39° N. and 49° N. and longitudes 42° W. and 60° W. were requested to report their position, course, speed, sea surface temperature, visibility, weather and sea conditions every 4 hours to Commander, International Ice Patrol. As in the past, the International Ice Patrol relied heavily on these reports, and cooperation by shipping was excellent.

(c) During the months of March and April, the Canadian Department of Transport made ice reconnaissance flights in the Gulf of St. Lawrence area and forwarded the results to Commander, International Ice Patrol, via the teletype net.

(d) Ice conditions off the east coast of Canada north of Newfoundland and off the west coast of Greenland were described in frequent reports received from the United States Hydrographic Office.

The ice information received by the International Ice Patrol was evaluated with respect to drift and mortality rate in order to—

(a) Eliminate from the NIK ice bulletins old reports of ice judged with certainty to have melted;

(b) Eliminate from the NIK ice bulletins old reports of bergs deduced with certainty to be identical with newly reported bergs;

(c) Allow for the probable drift of ice in planning ice observation flights to relocate that ice;

(d) Advise shipping to proceed with caution or to divert from established routes in areas not recently scouted, but in which the presence of ice was considered possible or probable on the basis of old reports and estimated drift;

(e) Recommend unscheduled shifts in the North Atlantic Track Agreement tracks when advisable; and

(f) Decide when to commence and suspend ice patrol operations at Argentina.

Estimates of ice drift and mortality rates were obtained by the use of the current charts constructed from data collected on the four oceanographic surveys made during the ice season by U. S. C. G. cutter *Evergreen* in critical parts of the ice patrol area,¹ the sea surface isotherm charts prepared semimonthly from the sea surface temperatures reported by shipping, and the wind data furnished by the United States Fleet Weather Central at Argentina. The current charts and isotherm charts for the 1954 ice season are shown in figures 15, 16, 18, 19, and 1 to 9, respectively.

The 1954 ice season in the Grand Banks area was marked by a return to fairly average berg conditions after three successive light ice years. Three hundred and twelve bergs drifted south of latitude 48° N. during 1954 as compared with 6 in 1951, 14 in 1952, 56 in 1953, and 404, the average annual number for the period 1900-53. The most southerly position reached by any berg was 39°51' N., 48°30' W., on 1 June. With respect to field ice the season was briefer than normal, and the pack did not reach south of latitude 47° N. at any time.

In the Gulf of St. Lawrence and St. Lawrence River, the pack ice broke earlier than usual, and the first ship reached Montreal via Cabot Strait on 30 March. By 22 April all the gulf and river routes were clear except the Strait of Belle Isle.

The pack concentration in the Strait of Belle Isle was reduced sufficiently by 11 June to permit the passage of ice-protected vessels. By 22 June the pack concentration was low enough for unprotected vessels to proceed through the strait with caution, and to the east of the strait Track G was clear of field ice. However, many bergs were scattered throughout the strait and along Track G as far east as the 1,000-fathom curve at that time and until the end of the ice season.

Between the first of the year and 7 March, several bergs were reported lying over 300 miles to the east and southeast of Cape Farewell. This unusual situation made for an unexpected hazard in the more northerly Atlantic shipping lanes and prompted an oceanographic survey to be made in the area to the east and southeast of Cape Farewell. Results of the survey are set forth elsewhere in this bulletin.

¹ Details of the oceanographic program are given elsewhere in this bulletin.

Because of ice conditions during the season, several recommendations in connection with the North Atlantic Track Agreement tracks were made by Commander, International Ice Patrol, viz:

(a) On 25 February a recommendation was made to shift United States-European shipping from Track C to Track B because of a number of bergs drifting south along the east slope of the Grand Banks. This recommendation was concurred in by the North Atlantic Track Agreement operators, and Track B was made effective on 26 February.

(b) On 26 February shipping using Canadian Track D was advised to divert so as to pass 20 miles south of all known ice (as given in the NIK ice bulletins). This distance was increased to 40 miles on 27 February and to 60 miles on 1 March to allow for drift of the bergs along the east slope of the Grand Banks pending the relocation of those bergs. This diversion was shown to be no longer necessary by aerial scouting on 6 March, and shipping was duly notified.

(c) Canadian Track E became effective on 11 April, and ships using that route were advised to cross longitude 45° W. in latitude $46^{\circ}30'$ N. westbound and $46^{\circ}00'$ N. eastbound to avoid field ice and bergs in the vicinity of Flemish Cap. On 10 May this diversion was eliminated, although caution between longitudes 45° W. and 52° W. was advised because of several bergs lying along the track in that area.

(d) Due to the presence of bergs near the Tail of the Banks on 24 June, a recommendation was made that Track B remain in force after 1 July, the scheduled date for Track C to become effective, until further notice. The North Atlantic Track Agreement operators concurred, and shipping was notified accordingly. Track C was made effective on 13 July by the North Atlantic Track Agreement operators when informed by Commander, International Ice Patrol, that no threat to Track C remained.

During the period 1-12 July, effective aerial scouting was conducted in the area south and southeast of the Tail of the Banks, along the east slope of the Grand Banks, and between the east coasts of Newfoundland and Labrador and the 1,000-fathom curve as far north as latitude $54^{\circ}30'$ N. No bergs remained which could threaten the major transatlantic shipping lanes during 1954. Therefore, the International Ice Observation and Ice Patrol Service for 1954 was terminated 16 July. However, at the request of Commander, International Ice Patrol, the United States Coast Guard Air Detachment at Argentia periodically made postseason ice reconnaissance flights covering the Labrador Current off the east coast of Newfoundland to prevent the undetected drift of any stray berg into the shipping lanes.

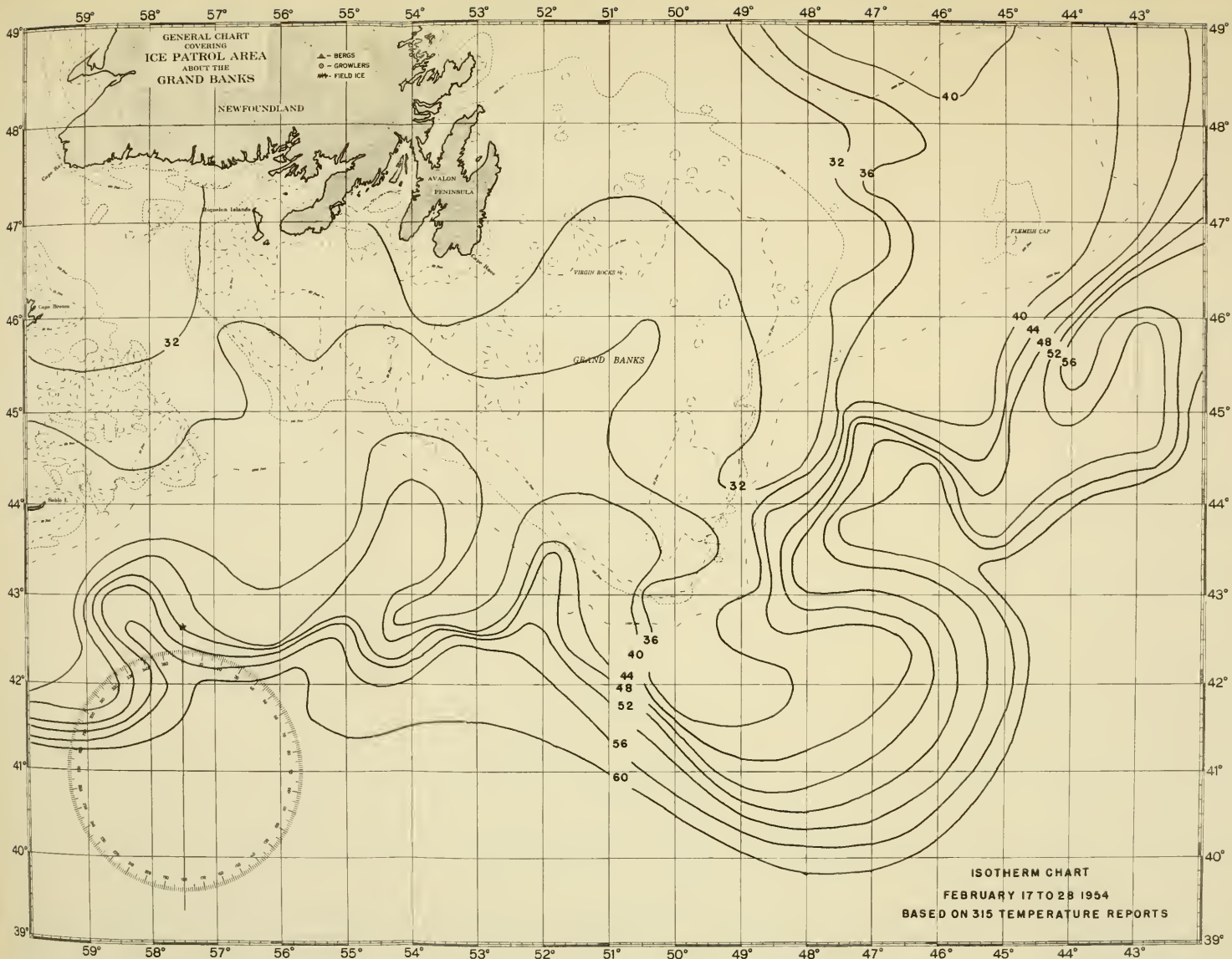


FIGURE 1.—Surface isotherms for the period 17-28 February 1954.

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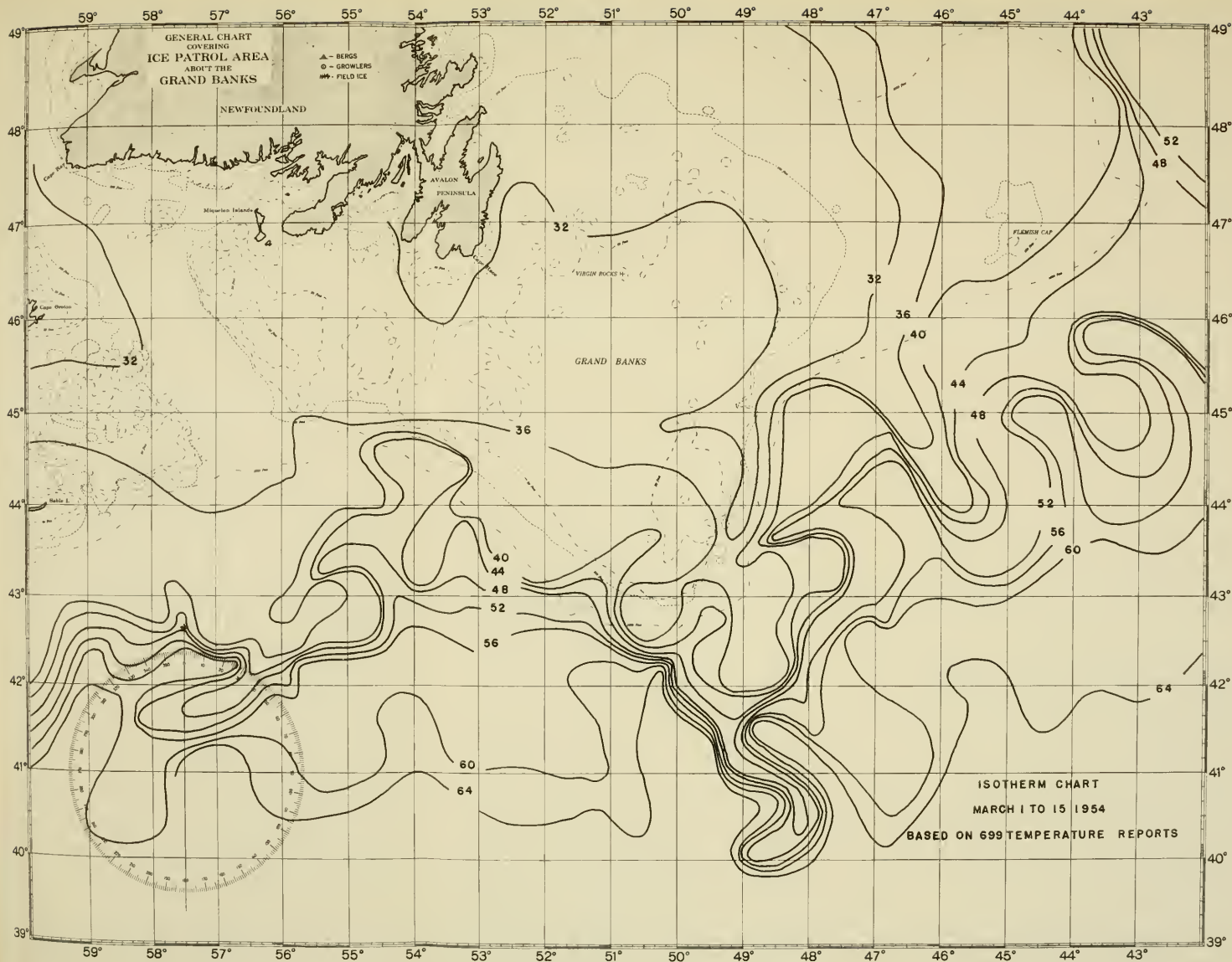


FIGURE 2.—Surface isotherms for the period 1-15 March 1954.

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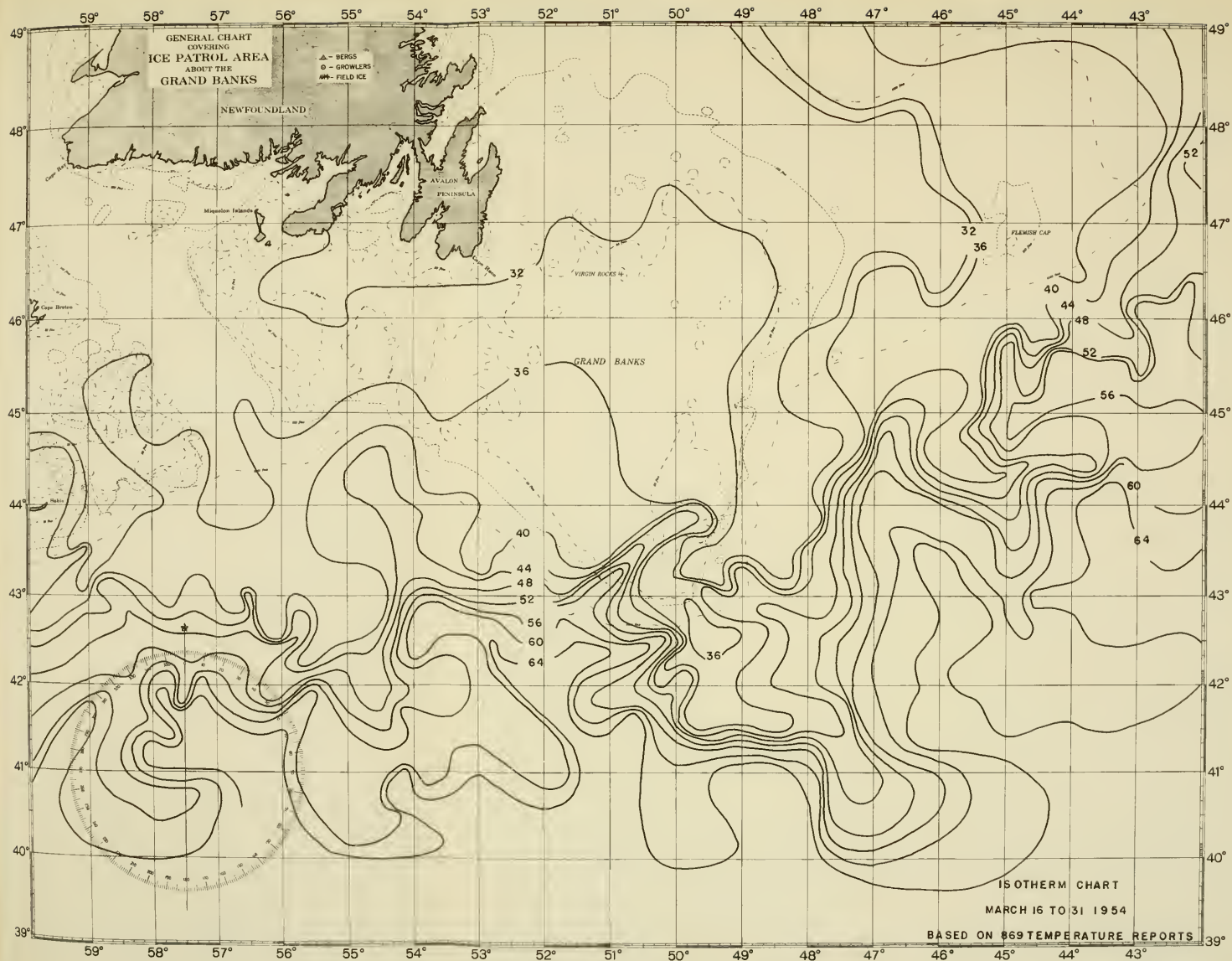


FIGURE 3.—Surface isotherms for the period 16-31 March 1954.

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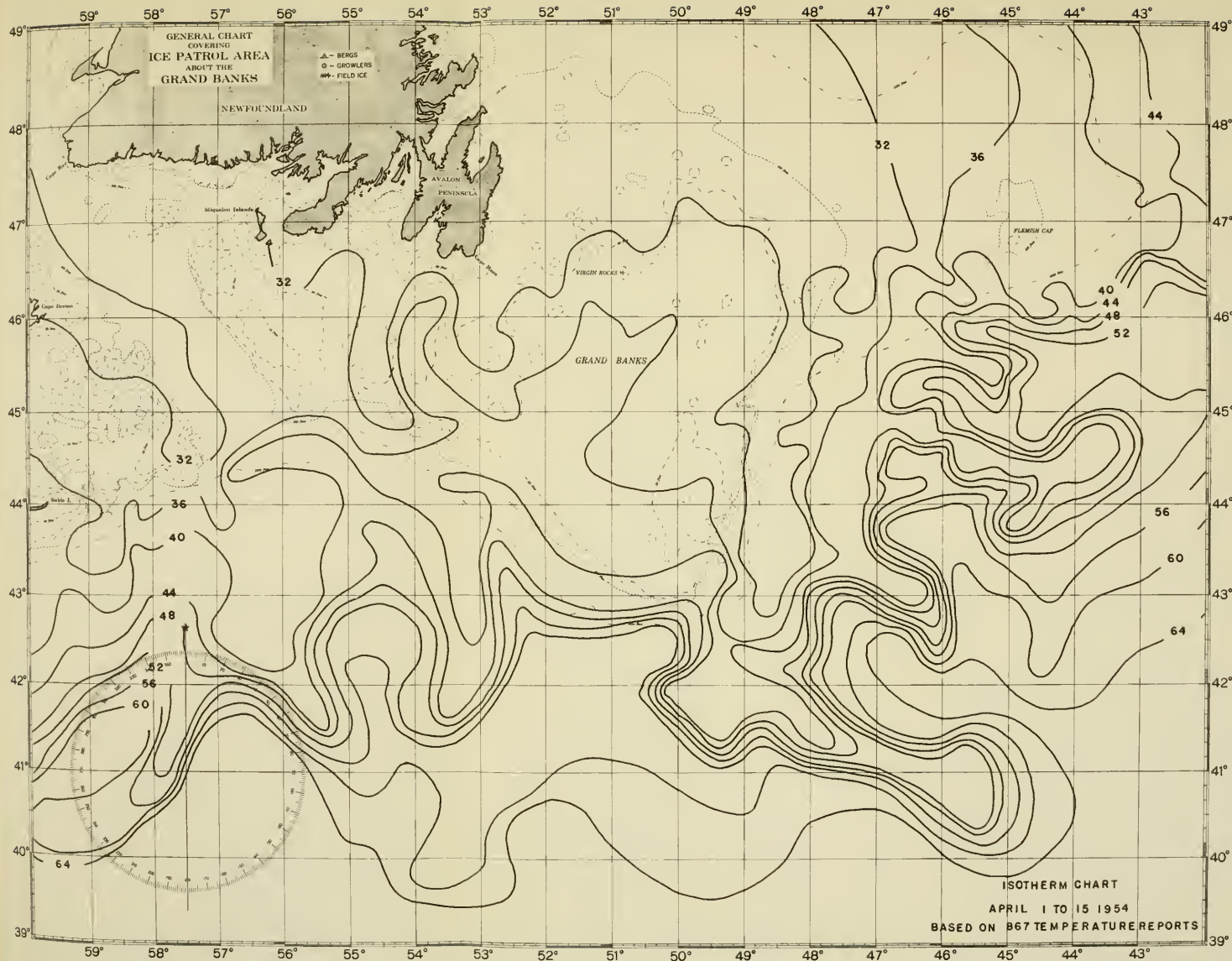


FIGURE 4.—Surface isotherms for the period 1-15 April 1954.

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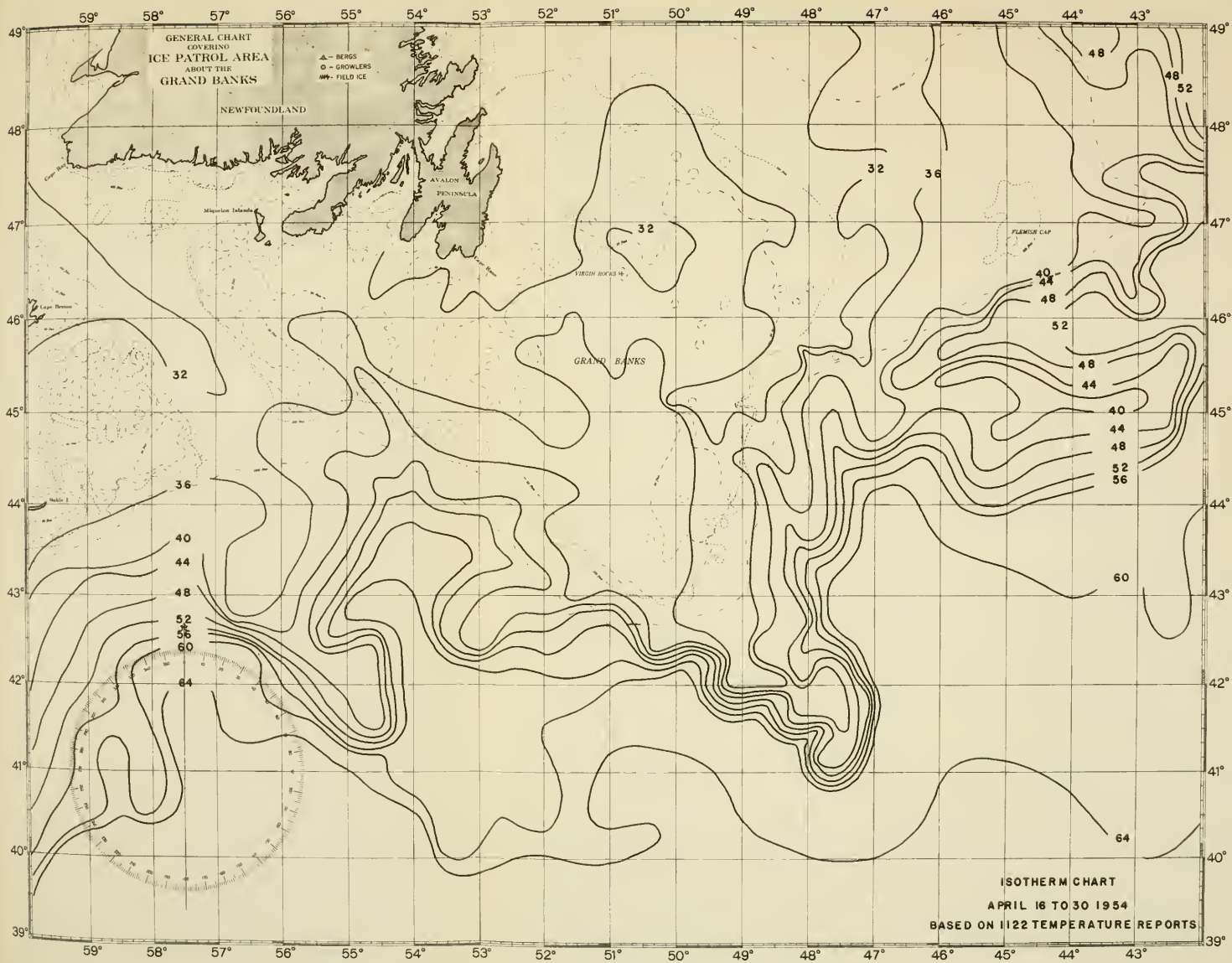


FIGURE 5.—Surface isotherms for the period 16-30 April 1954.

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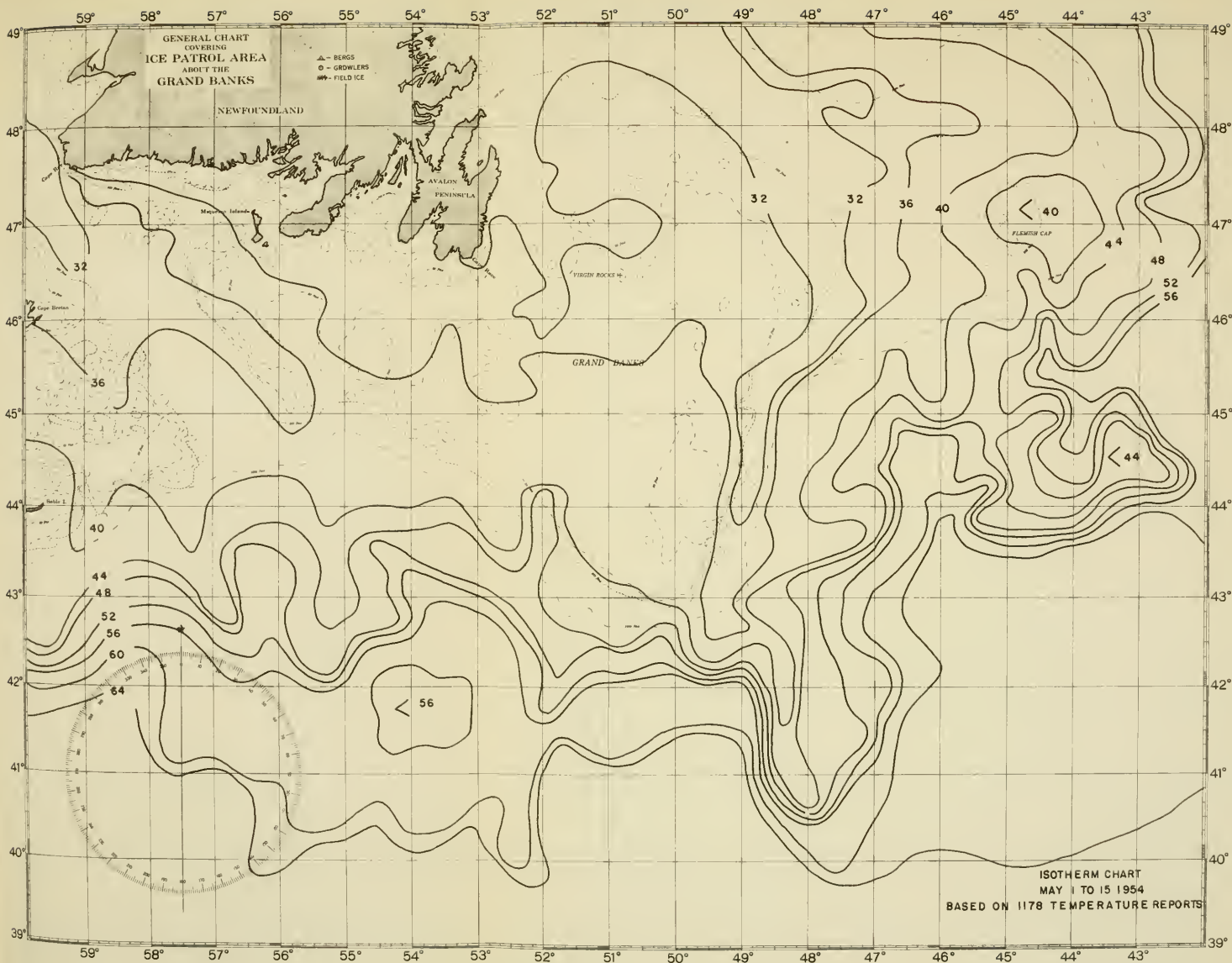


FIGURE 6.—Surface isotherms for the period 1-15 May 1954.

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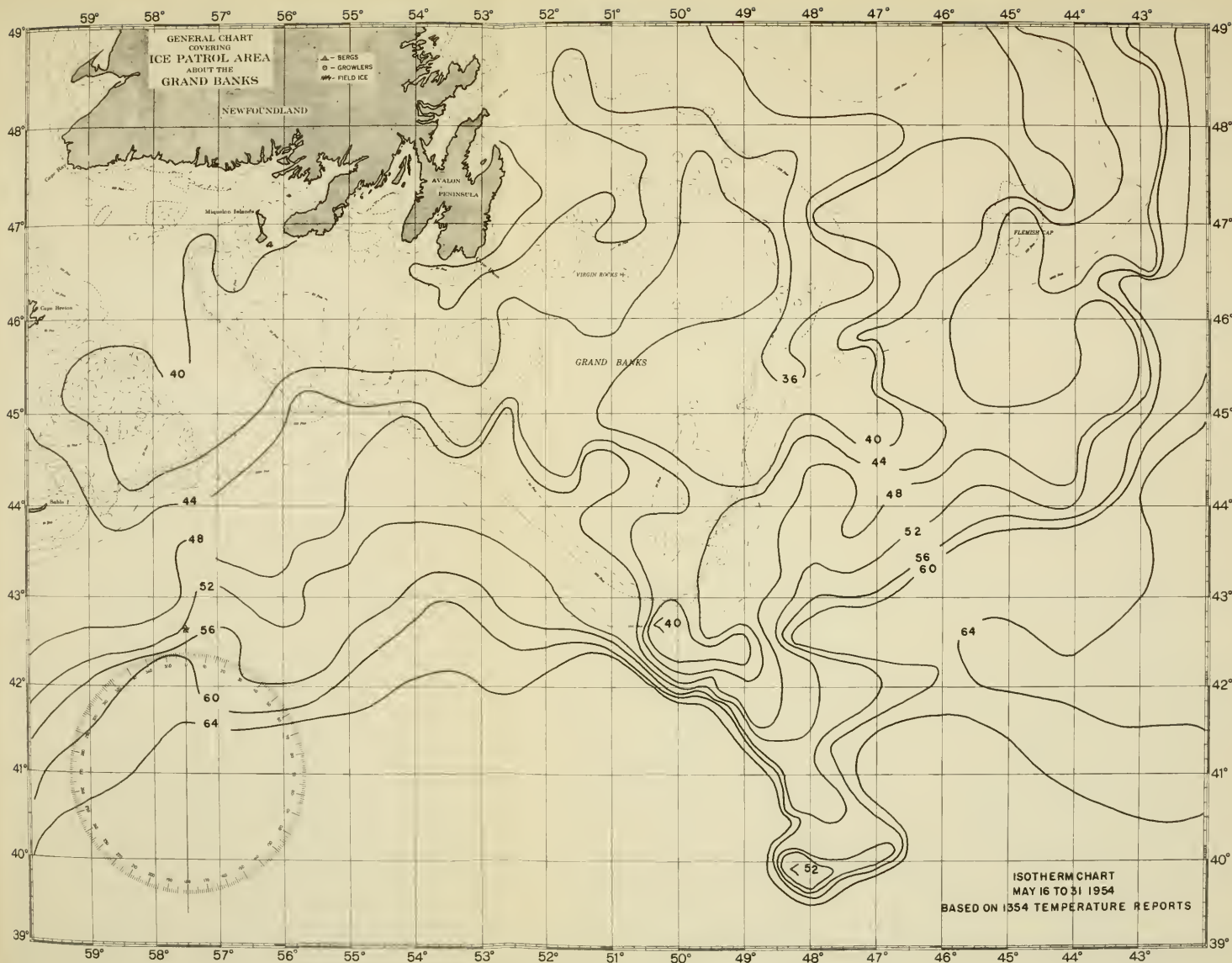


FIGURE 7.—Surface isotherms for the period 16-31 May 1954.

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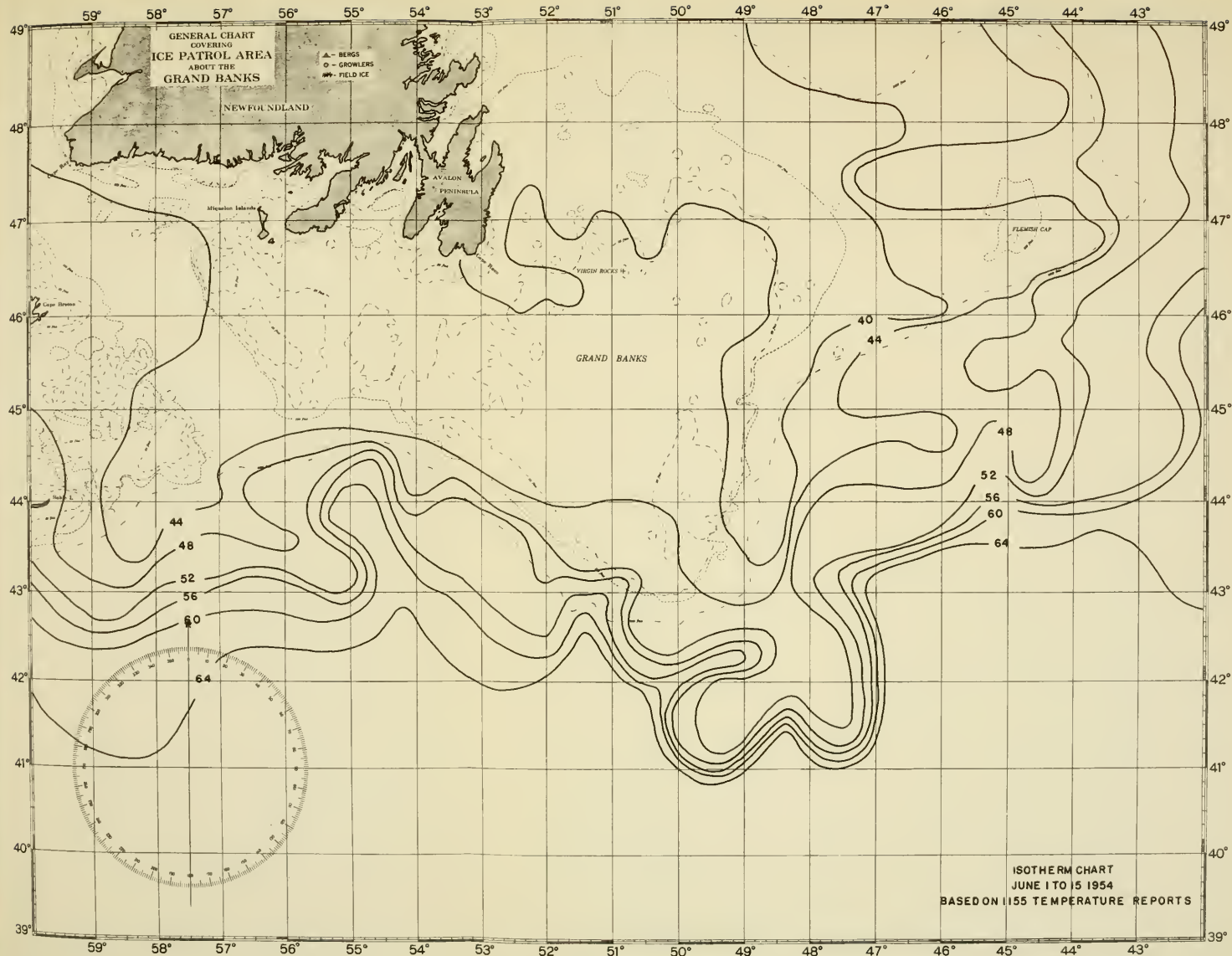


FIGURE 8.—Surface isotherms for the period 1–15 June 1954.

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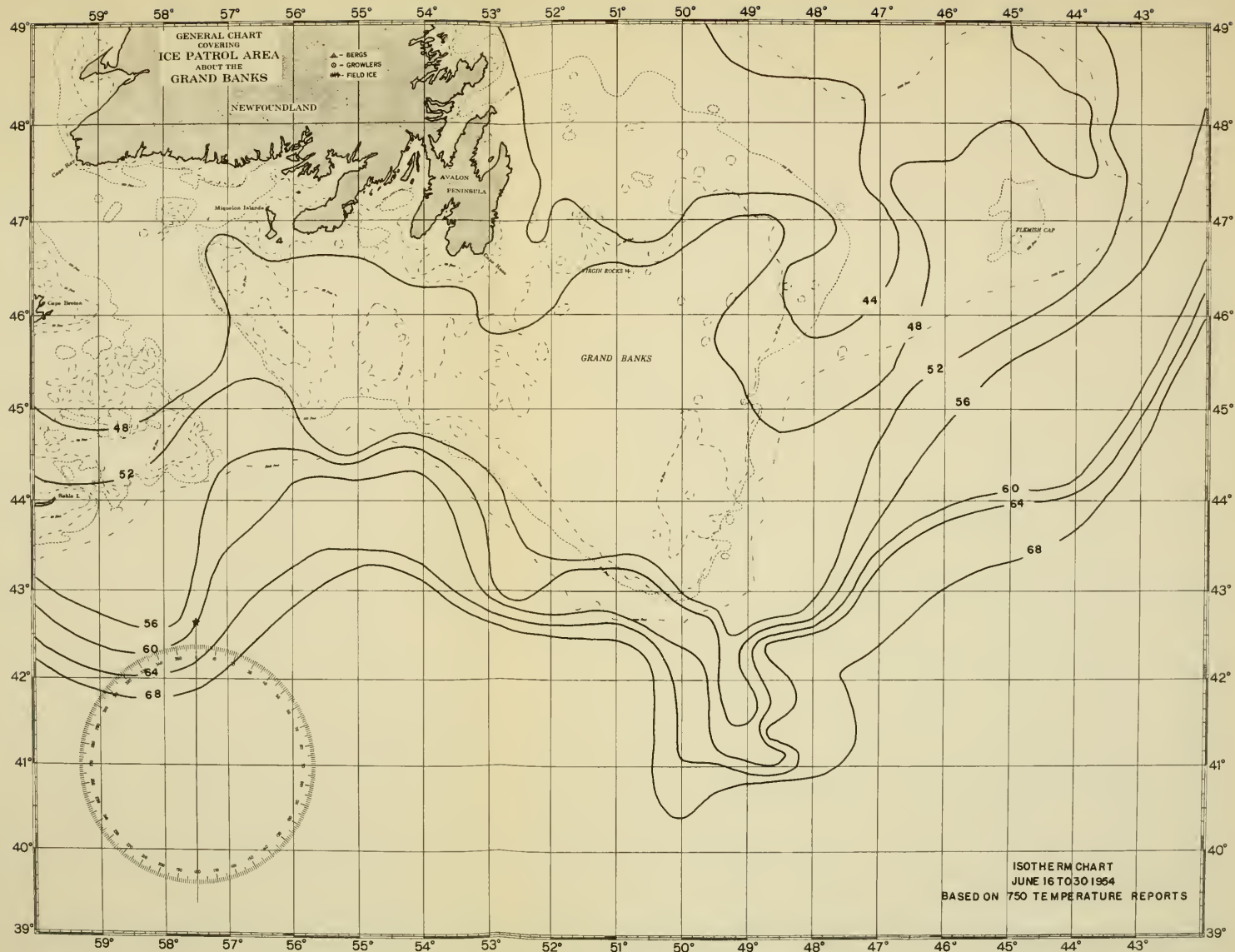


FIGURE 9.—Surface isotherms for the period 16-30 June 1954.

AERIAL ICE OBSERVATION

During the 1954 ice season, 84 ice observation flights were made. The average flight duration was 8.4 hours, and the average distance flown was 1,190 miles per flight. Two PB1G (B-17)-type aircraft, supplemented occasionally by UF-type aircraft, were utilized for these flights.

The ice observation flights were planned to locate the southeastern, southern and southwestern berg limits and field ice limits in the Grand Banks area and to scout upstream from those limits to determine the positions of bergs and the extent, concentration, and geographical distribution of field ice which endangered, potentially or actually, the shipping lanes. The usual flight plan covering the area to be scouted was a system of parallel lines spaced at 25-mile intervals. Because of the high frequency of poor visibility conditions in the scouting areas, it was necessary to keep well informed of weather conditions in order to choose days on which flights would be visually effective for ice observation. The weather forecasting service provided by the United States Fleet Weather Central at Argentia and the regular four hourly weather reports made to Commander, International Ice Patrol, by ships in the ice patrol area were of very great value in this connection. As mentioned previously, allowance was made for the probable drift of ice in planning ice observation flights to relocate that ice.

Most of the ice observation flights covered such large areas that it was unusual for visibility conditions to be good over the entire search area, and where visibility was restricted a radar search was carried out. There are, however, certain disadvantages to a radar search. First, small bergs or growlers may escape detection. Second, to distinguish between berg and nonberg radar targets it is necessary for the plane to divert from her search plan to close the range within the limit of visibility. A number of such diversions may use up so much plane fuel that part of the search plan must be deleted. Third, if the ceiling is too low, a radar target may not be identified at all.² Nevertheless, radar is a powerful aid to ice observation and has detected many a berg which might not have been discovered by visual means alone. It is also very useful in fixing the positions of bergs found visually.

A qualified observer was carried on each flight. He was responsible for plotting all ice sighted and recording berg sizes and descriptions and field ice concentrations. Berg descriptions, in written or sketched form, were useful in identifying bergs when they were relocated on subsequent flights. The ice observer worked closely with the plane navigator, who had at his disposal two automatic-tracking loran receivers as well as the usual equipment for celestial and dead reckoning navigation.

² Unsuccessful tests were conducted with an airborne radiation thermometer for the purpose of distinguishing between berg and nonberg radar targets under conditions of poor visibility.

Flight statistics for the season are given in the following table:

Table 1.—AERIAL ICE OBSERVATION STATISTICS FOR THE 1954 ICE SEASON

Month	Number of flights	Number of days on which flights made	Number of days good observing weather ¹	Average visual effectiveness ²	Maximum number days between flights	Miles flown	Hours flown
6-28 February.....	12	11	13	75	2	13,977	88.2
March.....	20	16	14	62	5	20,760	146.8
April.....	16	13	12	68	4	19,223	143.7
May.....	15	11	9	67	8	18,905	129.9
June.....	11	10	8	50	5	14,013	101.5
1-16 July.....	10	7	7	63	2	13,084	91.5
Total for 1954.....	84	68	63	64	4.3	99,962	701.6

¹ Days on which possible to search visually at least 50 percent of scouting area.
² Ratio of area actually searched visually to area planned to be searched.

COMMUNICATIONS

Commander, International Ice Patrol, communicated with shipping during the 1954 ice season via United States Coast Guard Radio Argentina (NIK), and with various interested agencies ashore via the teletype net.

Ice bulletins were broadcast twice daily at 0048 and 1248 G. M. T. on 155, 5320, and 8502 kilocycles after a preliminary call on 500 kilocycles. Each bulletin was broadcast twice, the first time at 15 words per minute followed, after a 2-minute interval, by the second broadcast at 25 words per minute. An automatic keying device was used on these broadcasts. Special safety messages were broadcast on 500 kilocycles whenever it was imprudent to hold recently acquired ice information until the next regularly scheduled bulletin was sent.

Ice reports were sent twice daily at 0030 and 1230 G. M. T. via the teletype net to the United States Hydrographic Office, Washington, D. C., the Canadian Department of Transport, Halifax, N. S., and the Royal Canadian Navy Radio Station at Albro Lake, N. S.

Merchant vessels communicated with United States Coast Guard Radio Argentina (NIK) by calling on 500 kilocycles or their assigned 8-megacycle calling frequency and working on 425, 454, 468, or 480 kilocycles or their assigned 8-megacycle working frequency; NIK worked on 432 or 8460 kilocycles.

NIK sent or received 16,485 radio messages and 25,577 landline messages during the 1954 ice season. Statistics concerning the reports received during the season are as follows:

Number of ice reports received from vessels.....	1,266
Number of vessels furnishing ice reports.....	350
Number of sea surface temperatures received.....	8,898
Number of vessels furnishing sea surface temperatures.....	490
Number of vessels requesting special information.....	54
Number of weather reports relayed to Observer, Washington.....	1,271
Total number of vessels worked.....	569

The percentage distribution of reporting vessels by nationality is as follows:

<i>Nationality</i>	<i>Percent of total</i>
Great Britain.....	25.5
U. S. A.....	20.7
Germany.....	9.3
Norway.....	9.0
Netherlands.....	7.4
Sweden.....	6.0
Italy.....	3.7
Canada.....	2.8
France.....	2.8
Panama.....	2.6
Denmark.....	2.3
Spain.....	2.1
Others (12 nations).....	5.8

ICE CONDITIONS, 1954

JANUARY

The first ice reported in 1954 to the International Ice Patrol was a large berg in 52°16' N., 51°43' W., on 3 January. No bergs were reported south of latitude 52° N. until the 22d, on which date a small berg was reported in 51°32' N., 50°31' W. A pre-season reconnaissance flight on the 25th found approximately 16 bergs and numerous growlers scattered off the east coast of Newfoundland between latitudes 48° N. and 52° N., and between the 100- and 1,000-fathom curves. Subsequent reports received during this month indicated a southerly to southeasterly movement of these bergs. Only one berg drifted south of the 48th parallel during January and was reported on the 31st in 47°50' N., 52°24' W.

On the 8th a berg was reported unusually far to the east of Cape Farewell, Greenland, in 59°30' N., 33°23' W.

On 15 January scattered sea ice formations extended eastward from Cape Freels, Newfoundland, to the 52d meridian. From that time to the end of January the amount of sea ice south of latitude 52° N. increased. By the 31st scattered to heavy concentrations of sea ice reached as far south as latitude 48°30' N. and as far east as the 49th meridian.

FEBRUARY

The southerly movement of bergs during January continued in February. Numerous bergs drifted south of latitude 52° N. All of these remained inside the 1,000-fathom curve east of Newfoundland, except eight bergs in the area bounded by latitudes 48°30' N. and 49°56' N. and longitudes 46°50' W. and 48°10' W. About 16 bergs traveled south of the 48th parallel during the month. Fourteen of these were found on the 24th scattered roughly along the 100-fathom curve on the eastern slope of the Grand Banks as far south as latitude

45°44' N. The other two were located on the 23d in the vicinity of Flemish Cap in positions 47°01' N., 43°45' W., and 47°15' N., 45°50' W. Four bergs were observed on the 20th west of longitude 52° W. and between the 48th and 49th parallels.

Three bergs were reported on the 22d in positions unusually far to the southeast of Cape Farewell, Greenland. Two of these were in 57°39' N., 36°12' W., and the other in 57°45' N., 36°11' W.

Throughout February the field ice limits in the Grand Banks area advanced to the south and southeast. The last week of the month found a tongue of scattered to broken field ice projecting south along the eastern slope of the Grand Banks to latitude 46°12' N. between longitudes 46°30' W. and 48°00' W. West of this tongue the southern limit of the field ice lay roughly along latitude 47°50' N. to the coast of Newfoundland.

A vessel steaming across Cabot Strait on the 22d encountered scattered to broken field ice from 47°50' N., 59°25' W., south to Cape Breton.

The distribution of ice reported during February is shown graphically in figure 10.

MARCH

During March there was no appreciable southward advance of the berg limits established in February. The most southerly position attained by any berg in March was 45°36' N., 47°34' W., on the 19th. There was, however, a movement which carried a number of bergs well to the east of the northeastern edge of the Grand Banks. In the last half of the month bergs were scattered between the 48th and 49th parallels from the east coast of Newfoundland as far east as longitude 42°05' W. A number of other bergs were found between Flemish Cap and the 100-fathom curve on the eastern slope of the Grand Banks between latitudes 45°36' N. and 48°00' N. Approximately 47 bergs drifted south of the 48th parallel during the month.

Nine bergs were reported early in March in positions east-southeast to east of Cape Farewell, 280 to 400 miles distant. These bergs were well outside the usual limits for that area.

In the Grand Banks area the field ice limits receded northward during March from those established in the last week of the preceding month. By the 28th the limits roughly approximated a line from Cape Bonavista, Newfoundland, to 48° N., 51° W., thence due east to longitude 47°17' W., thence north-northwest.

March saw the breakup of the pack in the Gulf of St. Lawrence and St. Lawrence River. On 7 March the major steamer track to Montreal via Cabot Strait was obstructed by light to moderate concentrations of field ice between Cabot Strait and Fame Point. West of Fame Point the river was covered by close pack and was not navigable. By the 18th this route was quite clear of ice between

Cabot Strait and Fame Point, but west of Fame Point the river was still closed to navigation except for local river shipping. The decrease of the pack concentration in the St. Lawrence River in the last half of March permitted a transatlantic ship to reach Montreal on the 30th. Throughout the last 3 weeks of March the area within 60 miles of the east coast of Cape Breton Island was encumbered by scattered to heavy concentrations of field ice which had drifted out of the Gulf of St. Lawrence through Cabot Strait.

The distribution of ice reported in March is shown graphically in figure 11.

APRIL

By far, more bergs were carried into the Grand Banks area during April than in any other month of 1954, and the berg limits advanced somewhat to the south and southeast. In the first half of the month numerous bergs entered the area bounded by the 48th and 49th parallels, the coast of Newfoundland, and the 43d meridian. Approximately 165 bergs drifted south of the 48th parallel in this month. By the last week in April the majority of these bergs were distributed along the northeast slope of the Grand Banks between the 50- and 1,000-fathom curves and along the east slope of the Grand Banks between the 46th and 48th meridians as far south as latitude $45^{\circ}20'$ N.; 4 bergs were found about 80 miles south of Flemish Cap, about 8 more lay in the sector within 60 miles and northwest to east-northeast of Flemish Cap, and 4 were located quite close inshore near Cape St. Francis, Newfoundland. On the 28th a berg was reported in $44^{\circ}20'$ N., $48^{\circ}18'$ W., the most southerly position attained by any ice in the month.

The field ice limits in the Grand Banks area advanced to the south and east during the first week in April, and although they did not reach the extreme southerly limits for the season established in February in latitude $46^{\circ}12'$ N. on the east slope of the Grand Banks, they attained the extreme easterly limits for the season in longitude $45^{\circ}30'$ W. at the 48th parallel. From the latter point the field ice limits on 5 April ran south-southwest to latitude $47^{\circ}12'$ N., thence roughly along a straight line to Cape Bonavista, Newfoundland. For the rest of the month the field ice limits receded toward the north and west. By the end of the month no field ice was present south of latitude $47^{\circ}25'$ N. or east of longitude $47^{\circ}15'$ W., and the only field ice remaining south of the 48th parallel was a light concentration on the northeast slope of the Grand Banks.

Scattered field ice encumbered the major shipping track in the Gulf of St. Lawrence from Cabot Strait to Fame Point during the first week in April, and the river route from Fame Point to Montreal passed through light to moderate concentrations of pack ice which were steadily reduced as the month wore on. On the 22d all the gulf

and river routes were clear of ice except for the route through the Strait of Belle Isle. Scattered field ice persisted in the area within 60 miles of the east coast of Cape Breton Island until the 19th, after which date the area was clear.

Distribution of ice reported in April is shown graphically in figure 12.

MAY

The month of May was marked by a pronounced shift in the path followed by the majority of bergs entering the Grand Banks region and the drift of three bergs well to the south-southeast of the Tail of the Banks. Prior to May most of the bergs which came south of the 48th parallel skirted the northeast slope of the Grand Banks and were subsequently to be found on or east of the east slope of the Grand Banks. Of the estimated 65 bergs which drifted south of the 48th parallel during May, the large majority went aground in positions distributed over the entire northern half of the Grand Banks and along the east and south coasts of the Avalon Peninsula where they eventually melted.³ Three bergs traveled southward along the entire length of the east slope of the Grand Banks and beyond. The last reports received in May on the positions of these three bergs were as follows: one berg reported on the 27th in $41^{\circ}45' \text{ N.}, 49^{\circ}10' \text{ W.}$; one reported on the 28th in $42^{\circ}07' \text{ N.}, 48^{\circ}51' \text{ W.}$; and one reported on the 31st in $40^{\circ}02' \text{ N.}, 48^{\circ}30' \text{ W.}$, the most southerly position reached by any ice thus far in the season. During the first 3 weeks in May approximately 12 bergs were located in the area bounded by the east slope of the Grand Banks, the 45th meridian, and the 44th and 47th parallels. The most easterly ice reported in the month was a berg on the 20th in $44^{\circ}43' \text{ N.}, 44^{\circ}07' \text{ W.}$

No field ice was reported south of the 49th parallel in May. The field ice limits continued to retreat to the north and west for the rest of the ice season.

The Strait of Belle Isle route remained closed to shipping throughout the month.

Distribution of ice reported in May is shown graphically in figure 13.

JUNE

The number of bergs in the Grand Banks region diminished greatly in June. Most of the bergs which had stranded in the first half of May on the northern half of the Grand Banks and along the coasts of the Avalon Peninsula melted before the end of the first week in June. Of the three bergs located south-southeast of the Tail of the Banks in the last week in May, only one lasted until June and was sighted

³ The probable cause for the westward shift of berg path just described was the strong easterly wind component which prevailed along the east coast of Newfoundland during the first 9 days of May in contrast to the westerly component which prevailed from the start of the ice season to the last of April.

on 1 June in $39^{\circ}51'$ N., $48^{\circ}30'$ W., the most southerly position reached by any ice in 1954. This berg melted completely by 4 June. Approximately 16 bergs drifted south of the 48th parallel in the month. All but one of these went aground off the east or south coasts of the Avalon Peninsula. The other traveled southeast along the northeast slope of the Grand Banks as far as $46^{\circ}30'$ N., $47^{\circ}10'$ W., before it melted. Until the 19th, 3 or 4 bergs were to be found scattered along the east slope of the Grand Banks between the 44th and 48th parallels, but during the remainder of June no bergs were located in that area. Four bergs which drifted south to the vicinity of the Tail of the Banks were reported as follows: on 1 June, one berg in $43^{\circ}00'$ N., $47^{\circ}29'$ W.; on 6 June, one berg in $41^{\circ}22'$ N., $49^{\circ}35'$ W.; on 22 June, two bergs in $42^{\circ}49'$ N., $48^{\circ}46'$ W., and $43^{\circ}49'$ N., $48^{\circ}55'$ W., respectively. The most easterly ice reported in June was a berg on the 3d in $45^{\circ}00'$ N., $46^{\circ}20'$ W.

The field ice concentration was sufficiently reduced in the Strait of Belle Isle by 11 June to permit the passage of ice-protected vessels, and by the 22d so little field ice remained that the strait was open to all vessels. From the first of June to the end of the ice season many bergs were scattered throughout the strait and to the northeastward along Track G as far as the 1,000-fathom curve.

The distribution of ice reported in June is shown graphically in figure 14.

JULY

The ice season in the Grand Banks area ended in the first half of July. The last two bergs to drift south of the 48th parallel in 1954 did so during the first 4 days of July. Both of these bergs stranded in Conception Bay, Newfoundland, where they melted before the end of the month. Only one of the bergs found near the Tail of the Banks in June lasted until July. This berg drifted slowly southward and was last reported on the 6th in $42^{\circ}15'$ N., $49^{\circ}20'$ W. It was not re-located by a thorough aerial search on the 10th and was therefore judged to have melted. On 13 July no ice remained south of the 48th parallel except three growlers just off the south coast of the Avalon Peninsula and two bergs stranded in Conception Bay. North of the 48th parallel the ice situation was as follows in the last week of the month: approximately 30 bergs were distributed along the Newfoundland coast between Cape Bonavista and Cape Bauld; about 24 bergs remained in the Strait of Belle Isle; two bergs were drifting in the Labrador Current near 50° N., 51° W.; six bergs lay just inside the 1,000-fathom curve off the east coast of Newfoundland between latitudes $51^{\circ}00'$ N. and $52^{\circ}30'$ N.; about 30 bergs were located between the 1,000-fathom curve and the east coast of Labrador between latitudes $52^{\circ}30'$ N. and $53^{\circ}30'$ N.; there was no field ice south of the 53d parallel.

AUGUST-SEPTEMBER

Except for two bergs stranded off Baccalieu Island on 4 August, no bergs were reported during August or September south of the 50th parallel. North of that line the relatively high sea surface temperatures which prevail during that part of the year took a heavy toll of the many bergs which were present in the area during July. Although the area was not completely scouted, it may be roughly estimated that by the end of September hardly a dozen bergs remained of the 92 bergs found in July south of latitude 53°30' N.

OCTOBER-DECEMBER

The only ice reported in the Newfoundland area during the period October-December was a berg sighted on 8 December in 51°28' N., 51°38' W.

During the first part of December three reports were received of bergs well to the south and east of Cape Farewell, Greenland, as follows: on 1 December, a berg in 56°38' N., 42°42' W.; on 8 December, two bergs in 55°56' N., 41°47' W., and 55°38' N., 39°10' W., respectively.

TABLE OF ICE REPORTS, 1954

No.	Date	Name of vessel	North latitude	West longitude	Description
1	Jan. 3	Hydro.....	52 16	51 43	Large berg.
2	Jan. 8	Lagerfoss.....	59 30	33 23	Berg.
3	Jan. 15	USCG aircraft.....	{ Cape Freels eastward to		} Scattered sea ice formation.
4	Jan. 22	do.....	49 20	52 30	
5	do	do	51 32	50 31	Small berg, 50 feet high.
			Westward from 51° 45' W. between 49°30' N. and 51° 30' N.		Large fields of sea ice.
6	Jan. 24	U. S. C. G. cutter Coos Bay.	51°38' N. to 51°28' N. at 50°24' W. to 10 miles eastward.		Pack ice 6 inches to 3 feet thick.
7	Jan. 25	USCG aircraft.....	{ Within 30-mile radius of		} 2 small bergs, 5 medium bergs, and 2 large bergs.
8	do	do	51 00	51 50	
9	do	do	48 33	52 10	Medium berg.
10	do	do	48 50	51 20	Do.
11	do	do	49 03	50 28	Growler.
12	do	do	49 03	50 50	Do.
13	do	do	49 05	51 25	Small berg.
14	do	do	49 30	50 20	Do.
15	do	do	49 37	51 05	Do.
16	do	do	50 10	50 12	Do.
17	do	do	51 30	50 20	Do.
			Along 51°20' N. between 51°00' W. and 52°30' W.		Heavy sea ice.
18	do	U. S. C. G. cutter Matagorda.	47 59	49 28	Small growler.
19	Jan. 26	do	47 56	50 30	Radar target, believed ice.
20	do	U. S. C. G. cutter Coos Bay.	48 30	50 20	Radar target, evaluated as berg or growler.
21	do	do	48 45	49 45	Do.
22	do	do	48 50	49 48	Do.
23	do	do	48 51	49 41	Do.
24	do	do	49 05	49 11	Do.
25	do	USCG aircraft	48 32	49 20	2 growlers.
26	do	do	48 32	52 08	Medium berg.
27	do	do	48 55	48 50	Growler.
28	do	do	49 22	50 55	Medium berg (same as No. 9).
29	do	do	49 25	51 30	Small berg.
30	do	do	49 37	52 05	Do.
31	do	do	49 46	49 50	Medium berg (same as No. 10).

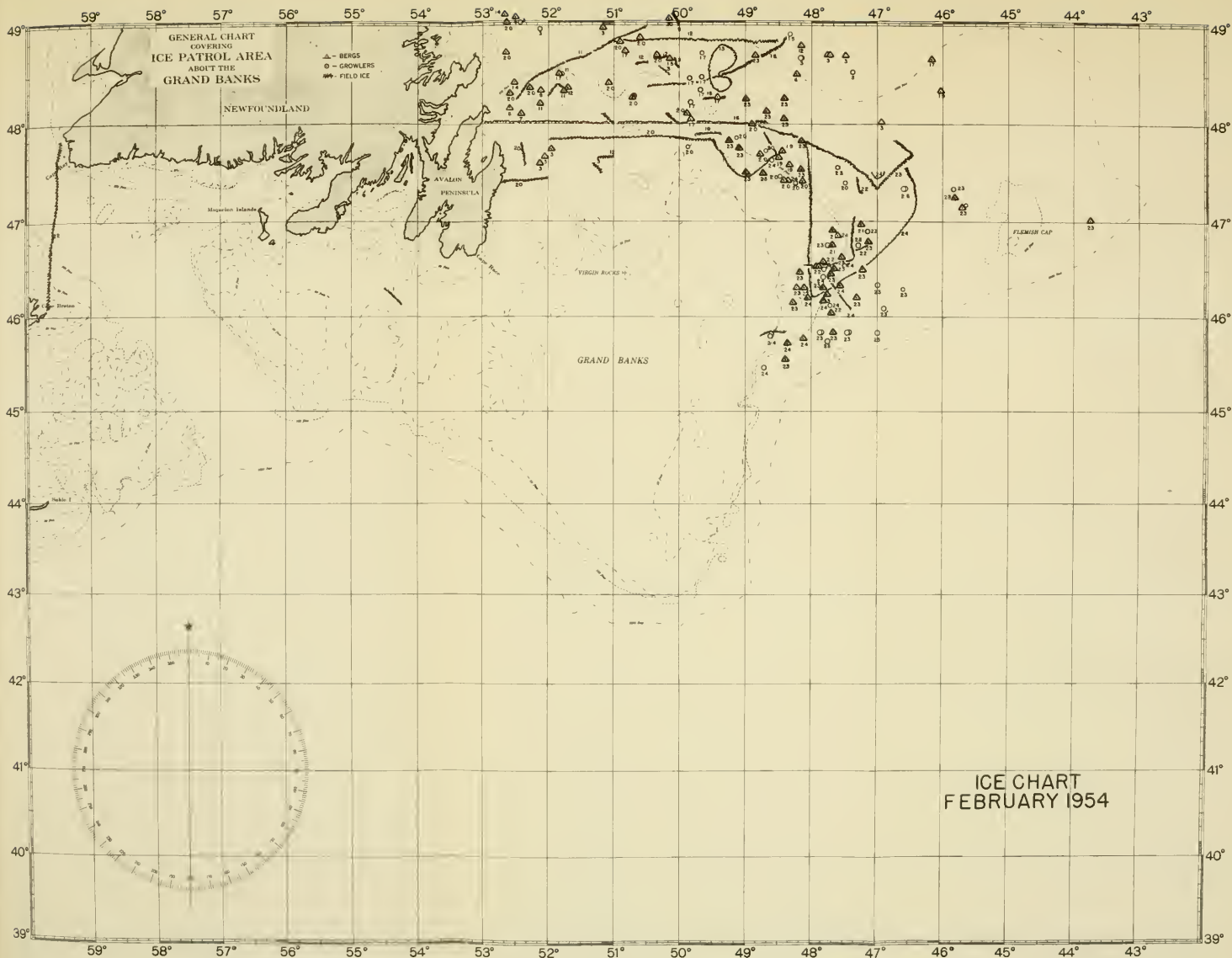


FIGURE 10.—Ice conditions, February 1954. Figures indicate day of month ice was sighted or reported.

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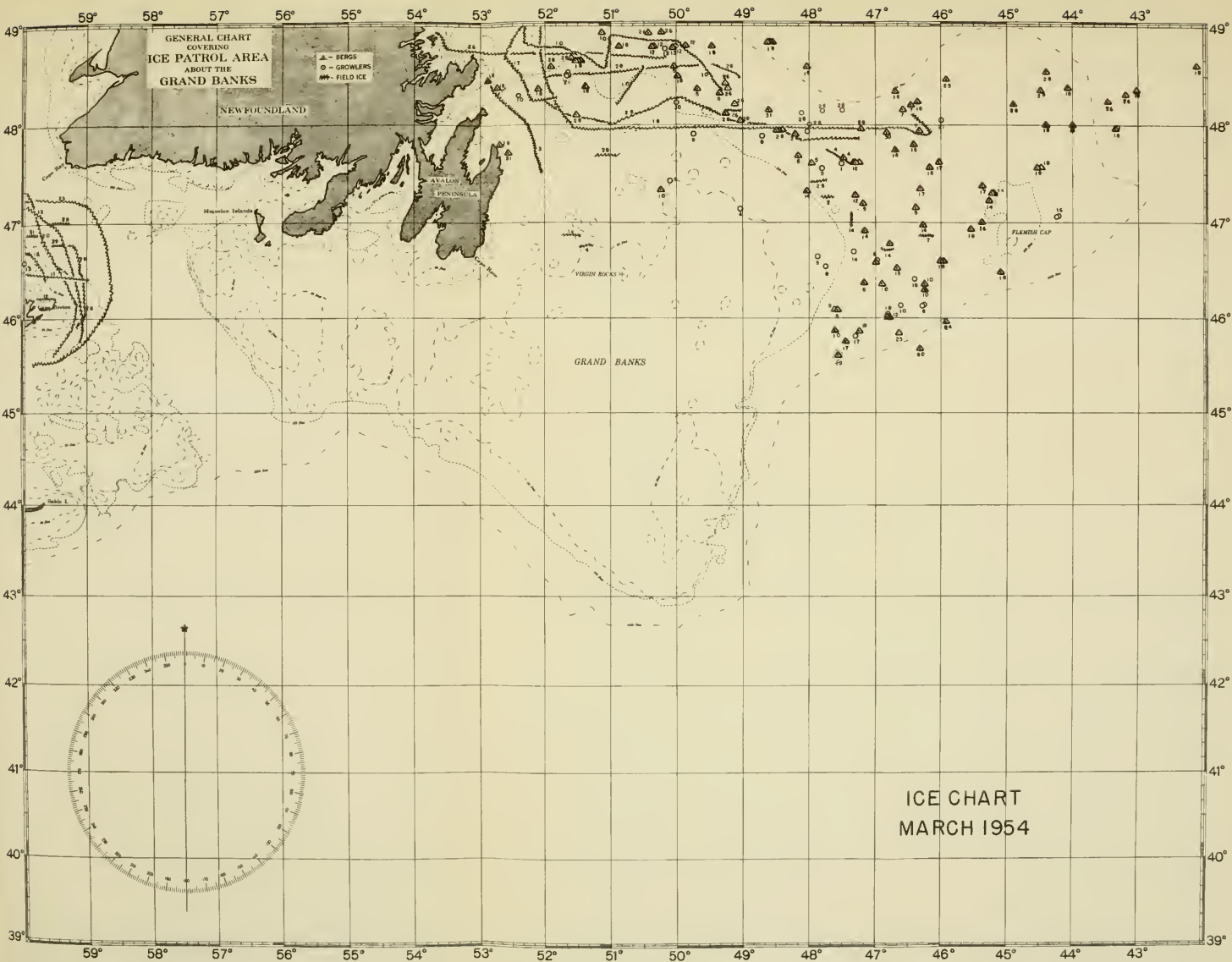


FIGURE 11.—Ice conditions, March 1954. Figures indicate day of month ice was sighted or reported.

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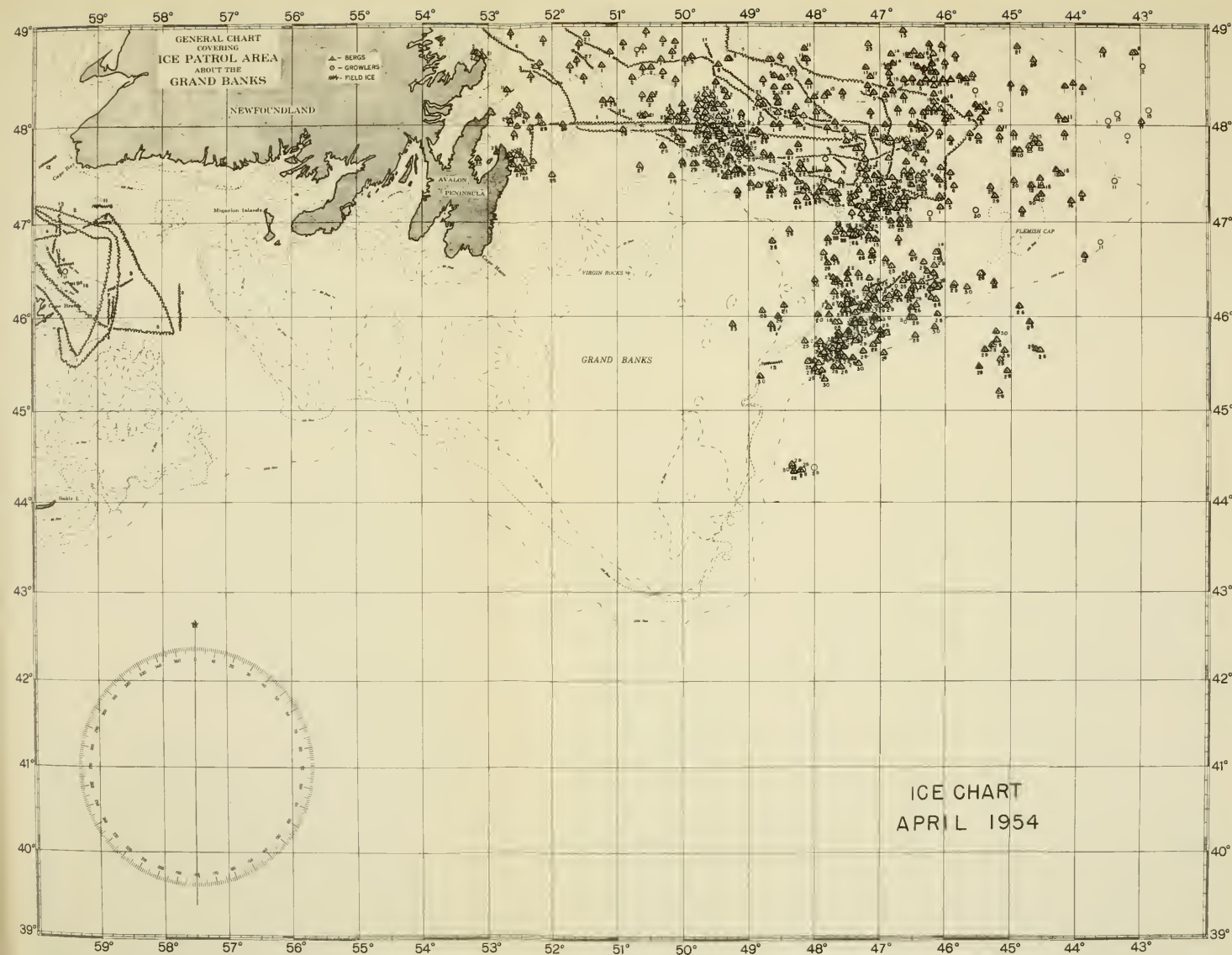


FIGURE 12.—Ice conditions, April 1954. Figures indicate day of month ice was sighted or reported.

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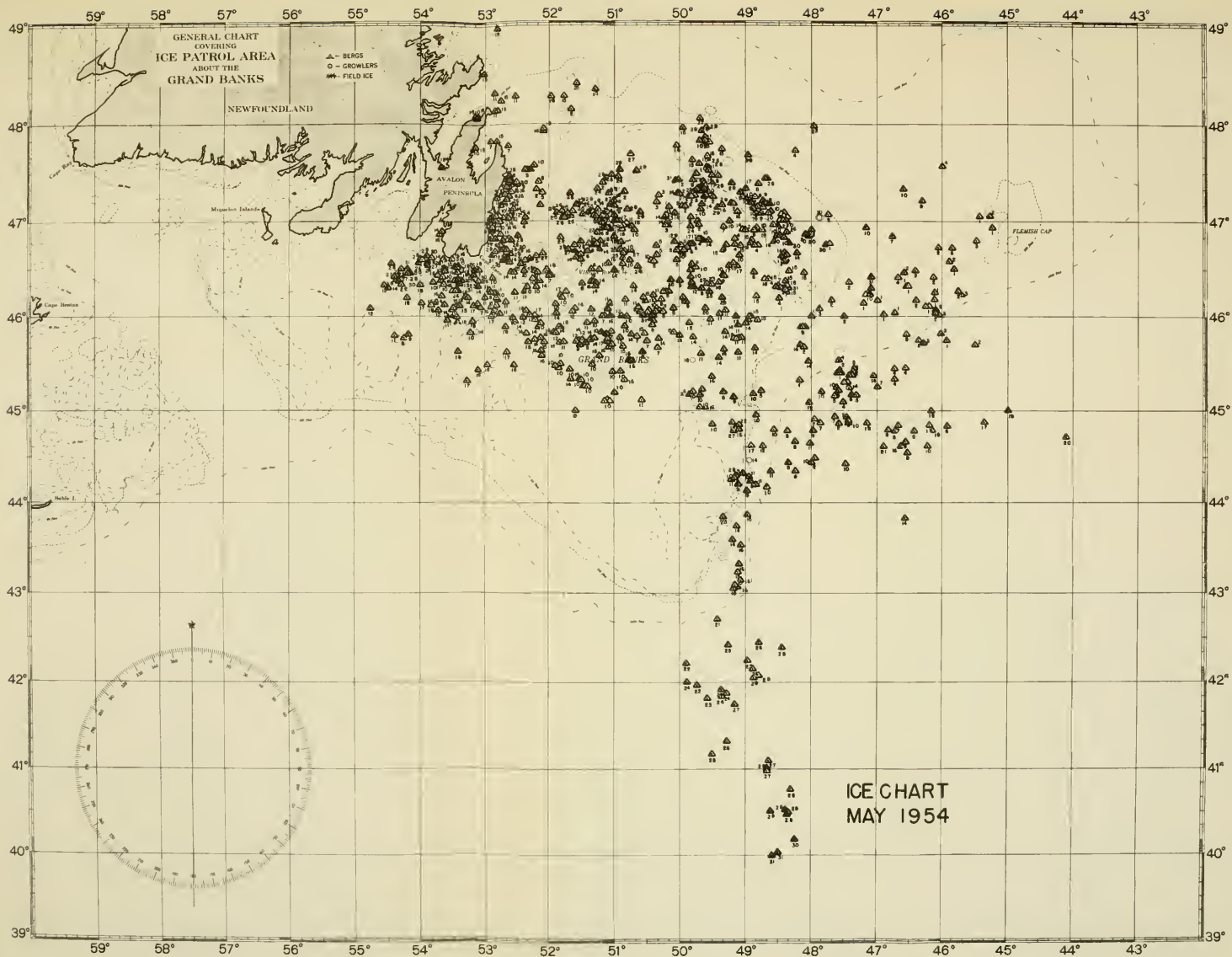


FIGURE 13.—Ice conditions, May 1954. Figures indicate day of month ice was sighted or reported.

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TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
32	Jan. 20	USCG aircraft	Westward from 48°50' W. be- tween 48°40' N. and 50°00' N.	° / °	Scattered sea ice and numerous growl- ers.
33	Jan. 30	Hydro	47 56	52 15	Medium berg.
34	do.	do.	48 05	49 32	Growler.
35	do.	do.	48 14	47 31	Do.
36	do.	do.	48 16	48 12	Small berg.
37	do.	do.	48 20	48 47	Growler.
38	do.	do.	48 22	48 42	Small berg.
39	do.	do.	48 35	51 07	3 growlers.
40	do.	do.	48 40	49 28	Growler.
41	do.	do.	48 41	50 47	Medium berg.
42	do.	do.	48 25	50 30	} Scattered sea ice.
43	Jan. 31	do.	and to NW.		
44	do.	do.	47 50	52 24	Large berg.
45	do.	do.	48 06	48 10	Berg.
46	do.	do.	48 14	48 21	Do.
47	Feb. 1	Fort Hamilton	48 26	47 17	Do.
48	Feb. 3	USCG aircraft	46 12	54 23	} Slob ice, band ½ mile wide.
49	do.	do.	and to NW. and SE.		
50	do.	do.	47 35	52 07	Medium berg.
51	do.	do.	48 20	48 10	2 growlers.
52	do.	do.	48 32	47 22	Growler.
53	do.	do.	48 42	47 29	Small berg.
54	do.	do.	48 43	47 44	2 small bergs.
55	do.	do.	48 58	52 07	Growler.
56	do.	do.	48 59	51 10	Small berg.
57	do.	do.	49 00	52 28	Growler.
58	do.	do.	49 32	51 19	Small berg.
59	do.	do.	49 33	50 32	2 growlers.
60	do.	do.	49 43	52 10	Small berg.
61	do.	do.	49 54	52 05	Do.
62	do.	do.	49 57	52 09	Do.
63	do.	do.	50 04	51 30	Do.
64	do.	do.	50 07	51 30	Do.
65	do.	do.	50 13	51 22	Growler.
66	do.	do.	50 18	51 06	Small berg.
67	do.	do.	50 22	50 53	Medium berg.
68	do.	do.	50 27	51 12	Growler.
69	do.	do.	50 30	51 15	Large berg.
70	do.	do.	50 37	51 15	Small berg.
71	do.	do.	50 45	51 27	Do.
72	do.	do.	50 55	51 35	Do.
73	do.	do.	48 30	50 10	} Heavy sea ice.
74	do.	do.	and to NW.		
75	do.	do.	47 30	51 10	} Scattered sea ice.
76	do.	do.	and to NW.		
77	do.	do.	48 00	51 00	} Light field ice.
78	do.	do.	and to NW.		
79	do.	do.	48 30	50 00	} Moderate to heavy field ice.
80	do.	do.	and to NW.		
81	do.	Hydro	49 08	51 12	Bergy bit.
82	do.	do.	49 10	51 01	Do.
83	do.	do.	50 37	50 02	Do.
84	do.	do.	50 35	53 55	Medium floe berg.
85	do.	Giorgio	47 45	51 58	Large berg.
86	do.	Lyngenfjord	48 01	46 57	Do.
87	do.	USCG aircraft	47 39	52 03	Medium berg (same as No. 48).
88	Feb. 6	Fort Hamilton	48 08	52 35	Large berg.
89	do.	Finnpulp	49 16	47 38	2 bergs, 1 growler.
90	Feb. 7	Ice patrol plane	48 06	52 25	Large berg.
91	Feb. 8	Topdalsfjord	49 54	46 51	Berg.
92	do.	Ice patrol plane	48 20	52 06	Medium berg.
93	do.	do.	48 31	48 14	Small berg.
94	do.	do.	49 03	52 30	Do.
95	do.	do.	49 30	51 35	Do.
96	do.	do.	49 50	51 40	Do.
97	do.	do.	49 40	50 15	Bergy bit.
98	do.	do.	48 00	50 00	} Scattered sea ice.
99	do.	do.	and to NW.		
100	do.	do.	49 00	50 00	} Broken sea ice.
101	do.	do.	and to NW.		
102	do.	Loch	49 55	46 51	Berg.
103	Feb. 11	U. S. C. G. cutter Castle	49 20	49 00	} Broken sea ice.
104	do.	Rock	and to W.		
105	do.	Ice patrol plane	48 20	51 46	Small berg.
106	do.	do.	NW. of line from		} Scattered to heavy sea ice.
107	do.	do.	48 15	52 30	
108	do.	do.	to		
109	do.	do.	49 00	50 30	

TABLE OF ICE REPORTS, 1954—Continued

No	Date	Name of vessel	North latitude	West longitude	Description
98	Feb. 11	USN vessel	48 12	52 07	Larger berg, 100 feet high.
99	do.	do	48 30	51 48	Bergy bit.
100	do.	do	49 07	52 06	1 growler, 1 bergy bit.
101	do.	do	49 52	51 05	Large berg, 200 feet x 300 feet x 150 feet high.
102	do.	do	50 57	51 03	Large berg, 75 feet x 75 feet x 155 feet high.
103	do.	do	52 28	52 36	Bergy bit.
104	do.	do	52 36	52 28	Large berg, 100 feet x 200 feet x 125 feet high.
105	do.	do	50 25	53 27	1 bergy bit, 1 medium berg, 150 feet x 300 feet x 30 feet high.
106	Feb. 12	Ice patrol plane	48 22	51 42	Medium berg.
107	do.	do	48 48	48 10	Small berg.
108	do.	do	48 25	51 50	{ and to S.E. and S.W.
109	do.	do	48 40	51 00		{ Moderate sea ice.
110	do.	do	48 37	50 35	{ Scattered pan ice.
111	do.	do	48 40	50 10		{ Do.
112	do.	do	48 32	49 23	{ Loosely scattered sea ice, 15-mile radius.
113	do.	do	48 50	48 30		{ Scattered to moderate sea ice.
			to		
114	Feb. 14	do	48 50	51 00	Moderate berg.
115	do.	do	48 25	52 31	Small berg.
116	do.	do	49 05	52 40	Do.
117	do.	do	49 06	51 29	Do.
118	do.	do	49 12	51 21	Do.
119	do.	do	49 17	50 06	Do.
120	do.	do	49 21	51 03	Do.
121	do.	do	49 32	52 49	Medium berg.
122	do.	do	49 34	50 59	Large berg.
123	do.	do	49 35	50 49	Small berg.
124	do.	do	49 36	51 15	Do.
125	do.	do	49 36	51 55	Do.
126	do.	do	49 37	50 00	Do.
127	do.	do	49 40	51 10	Large berg.
128	do.	do	49 48	50 34	Small berg.
129	do.	do	50 03	51 59	Do.
130	do.	do	50 04	50 46	Do.
131	do.	do	50 06	50 25	Do.
132	do.	do	50 07	52 02	Do.
133	do.	do	50 09	54 00	Do.
134	do.	do	50 17	53 45	Do.
135	do.	do	50 19	51 35	Do.
136	do.	do	50 22	52 22	Do.
137	do.	do	50 25	54 16	Do.
138	do.	do	50 25	50 48	Do.
139	do.	do	50 26	53 39	Do.
140	do.	do	50 27	51 03	Do.
141	do.	do	50 30	50 20	Do.
142	do.	do	50 34	51 55	Do.
			50 35	50 50	{ 6 growlers, 5-mile radius of position.
			N and W of line from Bacallieu Island to		
143	do.	do.	49 00	52 00	{ Scattered to close pack ice.
			to		
			49 00	49 00	{ thence N.
144	Feb. 15	Mathilda Thorden	48 55	48 20	
145	do.	do.	48 40	50 10	Growler.
			N. of line from		{ Large berg.
146	do.	do.	48 55	48 20	
			to		{ Scattered sea ice.
147	do.	Narsarssauk AB	48 30	50 35	
			To seaward of Narsak.		{ 56 bergs.
148	do.	do	BW-3 fjord		
149	do.	do	BW-3 harbor		{ 2 bergy bits.
150	do.	do	BW-1 harbor			{ 1 berg, 1 bergy bit.
					{ Clear.
151	do.	Godafoss	48 13	49 26	
			and to N.		{ Ice.
152	do.	USN vessel	49 08	51 20	
153	do.	do.	49 58	51 32	Large berg, 300 feet x 200 feet high.
154	do.	do.	50 07	51 27	Medium berg.
					{ Large berg, 300 feet x 100 feet x 200 feet high.
155	do.	do.	50 10	53 40	
156	do.	do.	51 26	53 40	Large berg 300 feet x 100 feet x 200 feet high
					{ Small berg, 50 feet x 50 feet x 50 feet high.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
157	Feb. 16	Bernhard Ingelssen	48 00	49 00	Drifting ice.
158	do.	U. S. C. G. cutter McCulloch.	48 14	49 22	Moderate sea ice.
159	Feb. 17	Ice Patrol plane	48 03	49 50	Small berg.
160	do.	do.	48 13	49 50	Growler.
161	do.	do.	48 16	49 26	Small berg.
162	do.	do.	48 21	49 41	Growler.
163	do.	do.	48 28	49 52	Do.
164	do.	do.	48 29	49 41	Do.
165	do.	do.	48 30	51 50	Small berg.
166	do.	do.	48 40	46 10	Medium berg.
167	do.	do.	48 44	49 40	Growler.
168	do.	do.	48 45	50 50	Small berg.
169	do.	do.	N. of 48° 00' N. from E. coast Newfoundland to 48° 40' W.		Scattered to broken field ice.
170	do.	British aircraft	49 23	53 02	Very large berg.
171	Feb. 19	SS. Noordam	47 39	48 30	Berg (same as No. 161).
172	do.	do.	47 44	48 27	Small berg (same as No. 159).
173	do.	SS. Polyana	47 35	48 20	Berg (same as No. 170).
174	do.	do.	47 50	49 30	Sea ice.
175	do.	Black Condor	48 20	46 02	Berg (same as No. 166).
176	Feb. 20	St. Johns radio	12 to 15 miles off Cape St. Frances to abeam St. Johns, New- foundland.		Field ice.
177	do.	Ice Patrol plane	47 24	47 29	Growler.
178	do.	do.	47 24	48 08	Small berg.
179	do.	do.	47 25	48 13	2 growlers.
180	do.	do.	47 25	48 25	Small berg.
181	do.	do.	47 27	48 28	Growler.
182	do.	do.	47 42	48 47	Medium berg.
183	do.	do.	47 44	48 42	Growler.
184	do.	do.	47 46	49 52	Do.
185	do.	do.	47 52	49 08	Do.
186	do.	do.	48 00	48 55	Medium berg.
187	do.	do.	48 04	46 16	Do.
188	do.	do.	48 06	49 53	Large berg.
189	do.	do.	48 16	50 43	Medium berg and growler.
190	do.	do.	48 18	52 36	Small berg.
191	do.	do.	48 22	52 18	Medium berg.
192	do.	do.	48 25	51 04	Small berg.
193	do.	do.	48 42	50 20	Medium berg.
194	do.	do.	48 44	52 38	Small berg.
195	do.	do.	48 50	50 55	Medium berg.
196	do.	do.	48 53	50 34	Large berg.
197	do.	do.	49 00	52 38	Do.
198	do.	do.	49 02	50 10	Do.
199	do.	do.	49 12	50 27	Do.
200	do.	do.	Coast of New- foundland at 47° 25' N. due E. to 52° 00' W.		Light brash.
201	do.	do.	{ 47 50 | 52 00 due E. to 49° 30' W. 47 50 | 49 30		Moderate to heavy sea ice.
202	do.	do.	{ 47 25 | 49 00 to 47 25 | 47 40 to 47 40 | 48 30 thence NNW.		Outer limits of field ice 9/10 cover.
203	Feb. 21	Stockholm	46 45	47 42	Large berg.
204	do.	do.	46 55	47 42	Do.
205	do.	do.	46 58	47 15	Berg.
206	do.	Narsarsuak AB	Narsak to seaward.		32 bergs.
207	do.	do.	Fjord.		3 bergy bits.
208	do.	do.	BW-1 harbor.		Clear.
209	do.	do.	BW-3 harbor.		Bergy bit.
210	Feb. 22	Cleopatra	46 02	47 41	Large berg.
211	do.	Caxton	46 31	47 54	2 small bergs.
212	do.	U. S. C. G. cutter Ingham	46 34	47 50	Medium berg.
213	do.	Trollafoss	57 39	36 12	2 bergs.
214	do.	do.	57 45	36 11	Berg.
215	do.	Caxton	{ 47 03 | 47 22 to 46 38 | 47 20 to 46 28 | 47 48 and to W.		Outer limits of field ice.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
216	Feb. 22	U. S. C. G. cutter Ingham	46 43	47 14	Southern limits of field ice.
217	do	do	47 16 and to NW.	47 13	Eastern limits of field ice.
218	do	U. S. N. S. Vela	47 50 and S. to Cape Breton.	59 25	
219	Feb. 23	Ice Patrol plane	45 32	48 23	Berg.
220	do	Carl Gorthon	45 45	47 45	Growler (same as No. 210).
221	do	Ice Patrol plane	45 50	47 00	Growler.
222	do	Carl Gorthon	45 50	47 28	2 growlers.
223	do	do	45 50	47 40	Small berg.
224	do	Ice Patrol plane	46 05	46 53	Growler.
225	do	Lyngenfjord	46 09	48 17	Berg.
226	do	Ice Patrol plane	46 12	47 20	Do.
227	do	Lyngenfjord	46 14	47 46	Do.
228	do	Ice Patrol plane	46 18	47 50	Do.
229	do	Lyngenfjord	46 19	48 13	Do.
230	do	Ice Patrol plane	46 20	47 00	Growler.
231	do	USN vessel	46 20	47 35	Berg 100 feet high.
232	do	do	46 27	47 43	Berg 50 feet high.
233	do	Lyngenfjord	46 28	48 11	Berg.
234	do	Ice Patrol plane	46 29	47 40	Do.
235	do	Sarek	46 30	47 13	Do.
236	do	Ice Patrol plane	46 37	47 32	Do.
237	do	do	46 45	47 17	Growler.
238	do	USN vessel	46 45	47 45	Bergy bit.
239	do	Ice Patrol plane	46 47	47 08	Berg.
240	do	do	46 54	47 10	Growler.
241	do	Sarek	47 01	43 45	Large berg.
242	do	Lyngenfjord	47 09	45 42	Large berg (same as No. 187).
243	do	Ice Patrol plane	47 15	45 50	Berg.
244	do	do	47 20	45 50	Growler.
245	do	do	47 30	48 44	Berg.
246	do	do	47 30	49 00	Do.
247	do	do	47 32	48 10	Do.
248	do	do	47 33	47 33	Growler.
249	do	do	47 45	49 04	Berg.
250	do	do	47 50	48 10	Do.
251	do	do	47 50	49 15	Do.
252	do	do	48 04	48 25	Do.
253	do	do	48 08	48 42	Do.
254	do	do	48 15	48 25	Do.
255	do	do	48 15	49 00	Do.
256	do	do	48 42	48 52	Do.
257	do	do	45 50 48 00	47 50 49 05	2 growlers and field ice.
258	do	do	46 20 47 40 and to NW.	47 00 46 30	
259	do	Lyngenfjord	46 25 and to SE.	47 47	Field ice.
260	Feb. 24	Ice Patrol plane	45 28	48 44	Growler.
261	do	do	45 44	48 21	Small berg.
262	do	do	45 46	48 07	Do.
263	do	do	45 48	48 28	Growler.
264	do	do	46 06	47 45	Do.
265	do	do	46 10	47 48	Small berg.
266	do	do	46 12	48 03	Medium berg.
267	do	do	46 17	46 36	Growler.
268	do	do	46 18	48 07	Small berg.
269	do	do	46 25	47 40	Growler.
270	do	do	46 30	47 46	Do.
271	do	do	46 32	47 28	Do.
272	do	do	47 10	45 37	Do.
273	do	do	47 25	48 22	Medium berg.
274	do	do	47 37	48 35	Growler.
275	do	do	47 52	47 38	Large berg.
276	do	Narsarsuaq AB	Narsak to seaward		30 bergs.
277	do	do	Fjord		Clear.
278	do	do	BW-3 harbor		Bergy bit.
279	do	Ice Patrol plane	47 50 46 10 to 47 25 thence NW.	48 10 48 00 46 25	Field ice limits.
280	do	Pedro de Barcelos	47 25	47 00	
281	Feb. 25	O. S. V. Bravo	56 47	51 03	Field ice.
282	do	do	56 58	51 10	Berg.
283	do	Narsarsuaq AB	Narsak to seaward		Do.
284	do	do	Fjord		24 bergs.
285	do	do	BW-1 harbor		2 bergy bits. Pan ice, 20 percent cover.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
286	Feb. 25	Narsarssauk AB	BW-3 harbor		Clear.
287	Feb. 26	Ice Patrol plane	47 20	46 36	2 growlers.
288	Feb. 28	Pedro de Barcelos	49 29	48 00	Large berg.
289	Mar. 1	Bedford Second	46 55	52 51	Radar target, possible berg.
290	do	Newfoundland	47 36	47 30	Growler.
291	Mar. 2	Nova Scotia	46 38	48 36	Radar target, possible berg.
292	do	U. S. S. Cavalla	56 02	33 21	Large berg and 7 growlers within 15-mile area.
293	do	Newfoundland	47 15	47 45	Thin string sea ice.
294	Mar. 3	Isaac Carter	44 10	45 55	Radar target, possible berg.
295	do	Ice Patrol plane	47 10	51 38	Do.
296	do	do	42 28	52 27	Do.
			48 25	52 50	
297	do	Ice Patrol aircraft	48 00	52 18	Outer limits of field ice.
			47	52 05	
298	Mar. 4	U. S. C. G. cutter Spencer	47 08	49 02	Growler.
299	do	do	47 14	49 07	Radar target, possible berg.
300	do	do	47 26	47 42	Do.
301	do	do	47 28	47 03	Do.
302	do	do	47 36	47 32	Do.
			47 37	47 46	
303	do	do	and within 16-mile radius.		Many radar targets, possible growlers.
304	do	do	47 40	47 29	Berg.
305	do	do	47 41	47 30	Radar target, possible berg.
306	do	do	48 12	46 36	Do.
307	do	do	48 16	46 27	Do.
308	do	Narsarssuak AB	Narsak to seaward.		5 bergs.
309	do	do	Fjord		6 bergy bits.
310	do	do	BW-1 harbor		Brash, 2/10 cover.
311	do	do	BW-3 harbor		Do.
312	do	U. S. C. G. cutter Spencer	46 45	51 26	Field ice.
			47 44	47 47	
313	do	do	to		Field ice, 1/10 to 2/10 cover.
			47 37	47 21	
314	Mar. 5	USN vessel	47 09	46 23	Berg 100 feet high.
315	do	do	47 12	47 10	Berg.
316	do	do	47 37	47 58	Do.
317	do	do	47 41	48 10	Berg 30 feet high.
318	do	do	48 19	49 21	Berg 50 feet high.
319	do	do	48 22	49 41	Berg 30 feet high.
320	do	do	48 36	50 02	Berg 100 feet high.
321	do	Narsarssauk AB	Narsak to seaward.		13 bergs.
322	do	do	Fjord		3 bergy bits and brash.
323	do	do	BW-1 harbor		Berg and bergy bit.
324	do	do	BW-3 harbor		Clear.
			53 30	51 30	
			to		
325	do	U. S. S. Atka	52 57	52 15	Ice blocks and brash, 4/10 to 9/10 cover.
			to		
			52 30	51 30	
			to		
			52 20	51 05	
			52 10	51 00	
326	do	do	to		Ice blocks and brash, 1/10 to 9/10 cover.
			51 50	51 03	
			to		
			51 15	51 00	
			49 33	51 12	
327	do	do	to		Pack ice.
			49 05	51 15	
328	Mar. 6	Vatnajökull	58 45	33 32	Berg.
329	do	do	58 57	33 26	Do.
330	do	U. S. C. G. cutter Absecon.	58 59	34 56	Do.
331	do	do	59 17	34 48	Do.
332	do	do	59 21	34 46	4 growlers.
333	do	Narsarssuak AB	Narsak to seaward.		12 bergs.
334	do	do	Fjord		2 growlers.
335	do	do	BW-3 harbor		5 growlers.
336	do	do	BW-1 harbor		Clear.
337	Mar. 7	Ice Patrol plane	46 34	47 58	Radar target, probable berg.
338	do	do	46 36	46 37	Do.
339	do	do	46 36	47 00	Do.
340	do	do	46 41	48 22	Do.
341	do	do	46 55	47 30	Do.
342	do	do	47 06	46 30	Do.
343	do	U. S. C. G. cutter Castle Rock.	47 57	46 20	Berg.
344	do	do	48 09	46 36	Small berg.
345	do	do	48 12	46 27	Large berg.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
346	Mar. 7	U. S. C. G. cutter Absecon.	56 48	37 44	3 radar targets, probable bergs.
347	do	do	56 57	36 19	Berg.
348	do	do	56 58	36 15	2 bergs.
349	do	do	57 06	37 22	Berg.
350	do	U. S. C. G. cutter Castle Rock.	46 51	46 15	Field ice.
351	Mar. 8	do	46 46	46 48	Large berg.
352	do	do	46 35	47 00	Small berg.
353	do	do	46 36	46 59	Growler.
354	do	Canadian Department of Transport.	Fame Point westward.		Close pack.
355	do	do	49 15	64 10	Do.
356	do	do	48 25	62 35	Scattered drift ice.
357	do	do	St. Paul Island.		String of scattered drift ice.
358	do	do	Cape North and 20 miles to SSE.		Narrow strip drift ice.
359	do	do	Along shore from Bay St. Lawrence to Henry Island.		Field of heavy drift ice.
360	do	do	Across north entrance George Bay.		Clear.
361	do	do	George Bay to Picton Island on Nova Scotia side.		Scattered pan ice.
362	do	do	West of line from Cape Bear to Caribou.		Open to docks.
363	do	do	Charlotte Harbor.		Close pack.
364	do	do	Brackley Beach to NE. of line from 47 10 | 63 10		Do.
365	do	do	47 10 | 63 10 to Miscou Island.		100 percent coverage.
366	do	do	Westward from entrance Bay Chaleur.		Scattered drift.
367	do	Narsarssuak AB	Bonaventure Island to Gaspé Harbor to Cape des Rosiers.		22 bergs.
368	do	do	Narsak to seaward.		1 berg, 6 bergy bits.
369	do	do	Fjord.		Clear.
370	do	do	BW-1 harbor.		5 growlers, 10 percent brash.
371	Mar. 9	Ice Patrol plane	BW-3 harbor.		Medium berg.
372	do	do	46 05 | 47 35		Do.
373	do	USN vessel	46 22 | 47 10		Bergy bit.
374	do	do	46 32 | 47 46		Do.
375	do	do	46 38 | 47 52		Do.
376	do	do	47 33 | 47 48		Do.
377	do	do	47 53 | 48 42		Do.
378	do	do	47 55 | 49 45		Do.
379	do	U. S. C. G. Cutter Absecon.	48 25 | 50 06		Berg.
380	do	do	46 04 | 47 37		2 growlers.
381	do	Narsarssuak AB.	46 08 | 46 17		63 bergs.
382	do	do	Narsak to seaward.		3 growlers.
383	do	do	Fjord.		Clear.
384	do	do	BW-1 harbor.		19 growlers.
385	Mar. 10	Ice Patrol plane	BW-3 harbor.		Berg.
386	do	do	45 52 | 47 37		Do.
387	do	do	46 18 | 46 14		Do.
388	do	do	46 21 | 46 14		Do.
389	do	do	46 21 | 46 54		Do.
390	do	do	46 08 | 46 37		Growler.
391	do	do	48 20 | 50 15		Berg.
392	do	do	48 56 | 51 08		Do.
393	do	do	48 13 | 50 00		Growler.
394	do	do	48 18 | 52 25		Do.
			48 20 | 49 20		
			48 50 | 50 00		
			48 55 | 51 00		
			48 35 | 51 04		
			48 50 | 52 20		
			to north		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
395	Mar. 10	Ice Patrol plane	48 25	50 42	Large area close packed ice extending 15 miles N.E. and S.W., 10 mile wide.
396	do	Narsarsuaq AB	Narsak to seaward.		61 bergs.
397	do	do	Fjord		Growlers.
398	do	do	BW-1 harbor		Clear.
399	do	do	BW-3 harbor		19 growlers, 15 percent brash ice.
400	Mar. 11	do	15 miles off Farewell, 17 miles off Prince Christian and to N.W.		10-15-mile-wide pack, 10/10 to 3/10 coverage.
401	do	do	56 00	50 00	Large ice pack, many leads.
402	do	do	Narsak to seaward.		83 bergs.
403	do	do	Fjord		6 bergs.
404	do	do	BW-1 harbor		1/2-inch skim ice.
405	do	do	BW-3 harbor		2 bergy bits, 11 growlers, 15 percent brash ice.
406	do	USN vessel	46 24	60 10	Numerous icefields.
			to		
407	Mar. 12	USN aircraft	46 25	58 58	Berg.
408	do	do	48 48	50 23	Do.
409	do	do	46 00	46 50	Do.
410	do	Unknown aircraft	48 48	49 52	Large berg.
411	do	do	47 17	47 18	3 small bergs.
412	do	SS. Gander	47 37	47 18	Strings of ice.
413	do	USN vessel	East of Flint Island		Large berg.
414	do	do	46 00	46 50	Do.
415	do	do	48 48	50 23	Growler.
416	Mar. 13	do	48 48	50 00	Berg 500 feet x 500 feet x 300 feet high.
417	do	do	48 47	50 11	Bergy bit.
418	do	do	49 14	50 51	Do.
419	do	TWA aircraft	49 10	52 00	2 bergs.
420	do	Canadian Department of Transport.	46 35	60 00	Growler.
421	do	do	Fame Point and to west.		Close pack to end of visibility.
422	do	do	49 15	64 10	Loose drift.
			to		
423	do	do	48 40	63 05	Clear water to north, scattered strings to south.
			48 40	63 05	
424	do	do	to Bird Rocks.		Clear.
			Bird Rocks to Cape Ray to St. Paul Island.		
425	do	do	St. Paul Island to 45 45 | 59 10		Scattered pack.
426	do	do	Strait of Canso		Scattered drift.
427	do	do	Southern half George Bay.		Close pack.
428	do	do	Cape George to 5 miles north of Pictou Island, to 5 miles south of St. Peters Island to Coldsprings Head.		Heavy close pack.
429	do	do	West of Termen-tine.		90 percent coverage, new ice and slob.
430	do	do	West Point to North Point, Prince Edward Island.		Close pack along shore, 8 to 10 miles wide.
431	do	do	Esseminac Point to Miscon Island and to east.		New ice and slob.
432	do	do	Southern part Bay Chaleur.		Close pack.
433	do	do	North side Bay Chaleur.		Clear.
434	do	do	Inner Gaspé Har-bor.		Solid pack ice.
435	Mar. 14	U. S. C. G. Cutter Camp-bell.	46 55	47 10	Berg.
436	do	do	46 58	46 17	Small berg.
437	do	do	47 09	45 17	Radar target, possible berg.
438	do	do	47 13	45 16	Berg.
439	do	do	47 18	45 13	2 bergs.
440	do	do	46 45	46 50	Ice patches.
441	do	Pierre Vidal	48 08	49 10	Ice.
442	do	Ice Patrol plane	47 19	48 02	Large berg.
443	do	do	46 42	47 23	Growler.
444	do	do	46 52	51 43	String of field ice.
			and east 12 miles		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
445	Mar. 14	Ice Patrol plane	46 58	47 24	Thin string field ice.
446	Mar. 16	Irmingard	46 25	46 25	Growler.
447	do.	Ogna County	47 00	45 23	Small berg.
448	do.	Kanangoora	47 03	44 15	2 growlers.
449	do.	Narsarsuak AB	Narsak to seaward		83 bergs.
450	do.	do	Fjord		4 bergy bits.
451	do.	do	BW-1 harbor		Clear.
452	do.	do	BW-3 harbor		3 bergs, 5 growlers, brash ice.
453	do.	U. S. S. Edisto	Arsuk Fjord to 60 00 | 49 00		Scattered bergs, growlers, and bergy bits.
			to		
454	do.	do	105 miles south Cape Farewell.		21 inches solid ice.
455	Mar. 17	Ice Patrol plane	45 45	47 28	Medium berg.
456	do.	do	45 49	47 22	Growler.
457	do.	Newfoundland	47 21	46 19	Medium berg.
458	do.	do	47 24	45 22	Berg.
459	do.	do	47 38	46 01	Medium berg.
460	do.	U. S. S. Edisto	52 15	52 00	Broken to close field ice.
461	do.	Krageholm	50 39 | 50 30		
			45 07 | 60 47	Belts drift ice to 5 miles east.	
			54 00 | 54 35		
			53 35 | 54 50		
			53 42 | 54 15		
			53 10 | 54 15		
462	do.	Hydro	53 05 | 54 32	Pack boundary.	
			53 45 | 52 05		
			52 15 | 52 25		
			51 00 | 51 52		
463	do.	do	50 32 | 50 15	Ice free.	
			Trinity Bay		
			49 05 | 52 15	Inner boundary pack.	
464	do.	do	48 40 | 52 35		
			48 30 | 52 25		
			48 15 | 52 15		
			to east.		
465	do.	do	North half Hare Bay.		Ice free.
466	do.	do	South half Hare Bay.		Close pack.
467	do.	U. S. S. Edisto	49 16	51 16	Strings brash and block ice.
468	Mar. 18	Ice Patrol plane	45 52	47 15	Medium berg.
469	do.	do	46 00	46 48	Growler (same as No. 446).
470	do.	do	47 44	46 43	Berg.
471	do.	do	47 48	46 25	Do.
472	do.	do	48 14	46 21	Do.
473	do.	do	48 21	46 42	Do.
474	do.	do	48 22	43 01	Do.
475	do.	do	48 22	52 07	Do.
476	do.	do	48 23	52 45	Do.
477	do.	do	48 24	51 24	Do.
478	do.	do	48 28	52 52	Do.
479	do.	do	48 30	49 59	Do.
480	do.	do	48 36	48 02	Do.
481	do.	do	48 37	42 50	Do.
482	do.	do	48 39	51 32	3 bergs.
483	do.	do	48 48	49 27	Berg.
484	do.	do	48 48	50 54	Do.
485	do.	do	48 50	48 37	3 bergs.
486	do.	do	49 00	51 29	Berg.
487	do.	do	49 04	47 19	Do.
			49 30	52 04	Field ice limits.
488	do.	do	47 58 | 51 34		
			47 55 | 46 17		
			thence NW.		
489	do.	Nova Scotia	47 29	45 05	Large berg (same as No. 458).
490	do.	do	47 30	46 39	Do.
491	do.	do	47 34	44 31	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
492	Mar. 18	Nova Scotia	47 35	46 10	Large berg (same as No. 457).
493	do	do	47 36	46 00	2 bergs.
494	do	do	47 58	53 23	Large berg, 1 growler.
495	do	Stavengerfjord	47 35	44 35	Large berg (same as No. 491).
496	do	do	48 00	44 24	Large berg.
497	do	do	48 00	44 00	Do.
498	do	do	48 23	44 05	Small berg.
499	do	do	48 02	46 00	Growler.
500	do	U. S. S. Edisto	48 30	51 40	4 growlers.
501	do	Narsarsuak A.B.	Narsak to seaward.		85 bergs and 70 percent consolidated pack ice.
502	do	do	Fjord		5 bergs, 10 bergy bits, 30 percent close pack ice.
503	do	do	BW-1 harbor		Clear.
504	do	do	BW-3 harbor		Berg, 15 growlers, 5 bergy bits.
505	do	Canadian Department of Transport.	Montreal to Three Rivers.		Moderate amount of shore ice. Not navigable.
506	do	do	Quebec to Baie Comeau and Matane.		Much broken ice, navigable.
507	do	do	Fame Point to 30 miles westward along coast.		Strip of close ice, 10-15 miles wide.
508	do	do	{ 49 15 | 64 10 to Bird Rocks to Cape Ray.		} Clear water.
509	do	do	South coast Newfoundland.		
510	do	do	{ 5 miles off Ingonish to 46 25 | 59 35		} Close pack.
511	do	do	Sidney Harbor		
512	do	do	Strait of Canso		Considerable ice.
513	do	do	Eddy point to Causeway.		Ice moving south through Strait.
514	do	do	Cape George to Henry Island to East Point.		85 percent heavy drift.
515	do	do	East Point to Tracadie.		Heavy close pack.
516	do	do	Tormentine to Point du Chene.		Close pack on shore over 15 miles wide.
517	do	do	West Point to North Point.		Close pack on shore 1-5 miles wide.
518	do	do	Boutouche to Miscon.		Close pack 3-20 miles wide.
519	do	do	Bay Chaleur		Clear except for few strings slob.
520	do	do	Cape des Rosiers to Fame Point.		Clear in north half. Close pack in south half.
521	do	USN aircraft	{ 64 14 | 53 30 to 68 00 | 54 15 to 67 30 | 54 50 to 67 00 | 54 55 to 66 30 | 55 18 to 66 10 | 56 00		} Pack boundary.
522	do	do	SW corner Disko		
523	do	do	Melville Bay		Less than 1/10 cover.
524	do	do	North Star Bay		10/10 cover.
525	do	do	Vicinity Bushnan's Island and Cape York.		Do.
526	do	do	Inner Melville Bay		Heavy concentration bergs.
527	Mar. 19	do	Baffin Bay north of 76°30' N.		Very light concentration bergs.
528	do	do	Smith Sound		Greater than 9/10 cover numerous poly.
529	do	do	Kane basin		Greater than 9/10 cover, many cracks and narrow leads.
530	do	do	Kennedy Channel		10/10 cover. No cracks or leads. Very heavily ridged and hummocked.
531	do	do	Hall Basin		Do.
532	do	do	Robeson Channel		10/10 cover, no cracks or leads.
533	do	do	Lincoln Sea to 83°00' N. between 47°00' W. and 64°00' W.		Do.
534	do	Ice Patrol plane	45 36	47 34	Large berg (same as No. 468).
535	do	Stavengerfjord	46 56	45 33	Berg (same as No. 447).
536	Mar. 20	Ice Patrol plane	45 40	46 19	Medium berg (same as No. 455).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
537	Mar. 20	Unknown aircraft	49 00	48 00	2 bergs.
538	do	Canadian Department of Transport.	Montreal to Quebec.		Not navigable.
539	do	do	Fame point to 40 miles westward.		Close pack 12-15 miles wide along Gaspé coast.
540	do	do	49 15 | 64 10		30 percent loose drift.
			48 20 | 62 10		
541	do	do	48 20 | 62 10		Clear.
			to		
542	do	do	St. Paul's Island		30-mile-long ice field.
			40 miles north of Brion Island.		
			5 miles off Cape North to		50 to 70 percent loose drift.
543	do	do	46 50 | 59 40		
			46 10 | 59 10		50 percent heavy drift.
544	do	do	45 35 | 59 30		
545	do	do	Eddy Point to Causeway George Bay to 50 miles to N.E.		100 percent close pack.
546	do	do	Northumberland Strait.		70 percent loose sheets.
547	do	do	Bordon to West Point.		80 percent sheets.
548	do	do	West Point to North Point.		5-20-mile-wide close pack along shore.
549	do	do	Bouctouche to Miscou.		All harbors solid.
550	do	do	Miscou to New Carlisle and to S.W.		Ice.
551	do	do	5 miles off Bonaventure Island northward along Gaspé coast		Continuous heavy loose drift.
552	do	Pan American aircraft	49 45 | 49 45		Growler.
553	do	Narsarsuak AB	Narsak to seaward		85 bergs, 95 percent consolidated pack.
554	do	do	Fjord		5 growlers.
555	do	do	BW-1 harbor		Clear.
556	do	do	BW-3 harbor		15 growlers, 2 bergy bits.
557	Mar. 21	USN aircraft	Baffin Bay north of 75°30' N. and west of 70°00' W.		9/10 to 10/10 cover.
558	do	do	Glacier Strait		10/10 fast ice.
559	do	do	Lady Ann Strait		Broken ice.
560	do	do	Cardigan Strait		Open.
561	do	do	Hell Gate from Calf Island to 76°35' N.		Do.
562	do	do	Norwegian Bay		10/10 cover.
563	do	do	Belcher Channel		Do.
564	do	SS Sargitta	46 54 | 59 56		6/10 cover.
565	do	Narsarsuak AB	Narsak to seaward.		81 bergs, 40 percent pack ice.
566	do	do	Fjord		3 bergy bits, 50 percent pack ice.
567	do	do	BW-1 harbor		Clear.
568	do	do	BW-3 harbor		4 bergy bits, 4 growlers.
569	Mar. 22	do	Narsak to seaward.		72 bergs, 80 percent loose pack.
570	do	do	Fjord		3 bergs, 16 bergy bits, brash ice.
571	do	do	BW-1 harbor		Clear.
572	do	do	BW-3 harbor		2 bergs, 20 growlers, 10 bergy bits, 50 percent brash.
573	Mar. 23	Lyngenfjord	45 50 | 46 40		Berg (same as No. 535).
574	do	Canadian Department of Transport.	Montreal to Quebec		Not navigable.
575	do	do	Fame Point to 50 miles westward.		50 percent cover, loose strings and patches.
			49 15 | 64 10		30 percent to 40 percent cover, loose strings and patches.
			48 15 | 62 05		
576	do	do	48 15 | 62 05		Clear water.
			to Bird Rocks.		
577	do	do	St. Paul Island to Cape Ray.		Continuous strings.
578	do	do			

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° / ' ° / '		
579	Mar. 23	Canadian Department of Transport.	St. Paul Island to 47 10 to 59 00		Outside limits field ice.
580	do	do	46 20 to 58 35 to 30 miles SW Scatari Island.		Inside limits field ice.
581	do	do	5 miles off Flint Island to 10 miles off Ingonish to Cape North.		Heavy ice.
582	do	do	5 miles off Cape North to 25 miles north of East Point.		Ice.
583	do	do	East Point to Cape George to Cape Bear.		25 percent loose drift.
584	do	do	South of Causeway. Strait of Canso.		95 percent heavy ice on island side.
585	do	do	Northumberland Strait west of Cape George and Cape Bear.		Strip close pack 1-2 miles wide.
586	do	do	Tormentine to Cape Bald.		Clear.
587	do	do	Shellic to Escuminac to Shipigan.		Close pack.
588	do	do	West Point to North Point to 40 miles to NE.		Heavy close pack.
589	do	do	South side Bay Chaleur, Miscou to 40 miles W.		Continuous loose drift.
590	Mar. 24	Ice Patrol plane	10 miles off Miscou to Bonaventure Island to Gaspe to Cape des Rosiers.		
591	Mar. 25	U. S. N. S. Johnson	45 58 45 56		Medium berg (same as No. 536).
592	do	do	48 24 45 42		Radar target, possible berg.
593	do	do	48 28 45 55		Berg.
594	do	U. S. C. G. cutter Bibb.	47 25 47 50		Medium heavy slush ice.
595	do	O. S. V. Bravo.	56 18 51 18		Medium berg.
596	do	U. S. C. G. cutter Bibb.	47 41 46 41		Radar target, possible berg.
597	do	Narsarsuak AB.	Narsak to seaward		71 bergs, 100 percent close pack.
598	do	do	Fjord		7 bergy bits, 100 percent close pack ice.
599	do	do	BW-1 harbor		Clear.
600	Mar. 26	U. S. C. G. cutter Bibb.	BW-3 harbor		2 growlers, 3 bergy bits.
601	do	do	48 24 46 11		Radar target, possible berg.
602	do	do	48 27 46 19		Do.
603	do	do	48 56 46 47		Do.
604	do	do	48 46 43 12		Do.
605	do	Sheldrake	48 18 43 12		Berg.
606	do	do	48 14 43 19		Do.
		Mormacisle	North of line from 48 28 to 52 00		Considerable pack ice.
607	do	do	48 28 49 02		Berg.
608	do	do	48 13 49 08		Do.
609	do	do	48 23 49 13		Do.
610	do	do	48 25 49 17		Do.
611	do	do	48 36 51 56		Do.
612	do	do	48 41 51 36		Do.
613	do	do	48 56 50 14		Do.
614	Mar. 28	Pan American plane.	48 58 50 25		Do.
615	do	Narsarsuak AB.	54 45 45 30		63 bergs, 40 percent drift ice.
616	do	do	Narsak to seaward		100 percent close pack.
617	do	do	Fjord		Clear.
618	do	do	BW-1 harbor		10 growlers, 2 bergy bits, 100 percent skim ice.
			BW-3 harbor		Not navigable.
619	do	Canadian Department of Transport.	Montreal to Quebec.		Few strings loose drift.
620	do	do	Fame Point N. and W. to limit of 40-mile visibility.		Scattered strings and patches, 10 percent cover.
621	do	do	Fame Point to Bird Rocks to Paul Island to Cape Ray.		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
622	Mar. 28	Canadian Department of Transport.	5 miles off Cape North to 46 45 | 59 20 to 45 50 | 59 05		Field ice.
623	do	do	to 10 miles off Scatari Island to 8 miles off Flint Island to 5 miles off Low Point to White Point.		
624	do	do	NW. coast, Cape Breton Island to end of 25-mile visibility.		Heavy close pack.
625	do	do	South of causeway, Strait of Canso.		Scattered drift.
626	do	do	North entrance, Strait of Canso.		Blocked by ice.
627	do	do	George Bay.		Covered with close pack.
628	do	do	George Bay to Pictou Island.		Heavy close pack.
629	do	do	Pictou Island to St. Peters Island.		Clear.
630	do	do	St. Peters Island to Borden.		40 percent loose ice.
631	do	do	Borden to Buctouche.		Clear.
632	do	do	Egmont Bay.		Close pack.
633	do	do	West Point to North Point.		Narrow strip close pack.
634	do	do	North Point to Shippigan Island.		Clear.
635	do	do	South side Bay Chaleur.		Heavy close pack.
636	do	do	Miscou Island east to limit 30-mile visibility.		Large field loose ice.
637	do	do	Miscou Island to Bonaventure Island.		Clear.
638	do	Base Operations, Goose Bay.	Bonaventure Island east to limit 30-mile visibility.		Large field.
639	do	do	Trinity Bay to NW.-SE. boundary pack at 48 40 | 50 10 49 15 | 49 35		Clear.
640	do	do	to		Outer boundary pack.
641	do	Ragna Gorthon	50 30 | 50 30		Large berg.
642	do	Ice Patrol plane	48 12 | 44 56		Do.
643	do	do	47 48 | 52 40		Berg.
644	do	do	47 55 | 48 14		Growler.
645	do	do	47 56 | 48 02		3 bergs.
646	do	do	47 57 | 48 30		Medium berg.
647	do	do	47 58 | 47 15		Growler.
648	do	do	48 00 | 48 00		Do.
649	do	do	48 01 | 48 06		Small berg.
650	do	do	48 03 | 49 01		Large berg.
651	do	do	48 06 | 51 31		Growler.
652	do	do	48 07 | 48 08		Medium berg.
653	do	do	48 07 | 49 16		Growler.
654	do	do	48 09 | 47 30		Do.
655	Mar. 29	Stavangerfjord	48 09 | 47 48		
656	do	do	Line from 48 15 | 52 00 to 48 00 | 51 00		
657	do	do	to 48 15 | 50 00 to 47 50 | 48 10		Southern limits of field ice.
658	do	do	to 47 50 | 47 19		
659	do	do	48 24 | 44 30		Large berg.
660	do	do	48 33 | 44 27		Do.
661	do	Kelley	47 00 | 59 30		Small broken icefields.
662	do	do	46 47 | 59 29		
663	do	do	to 46 45 | 59 12		Field ice.
664	do	do	to 46 29 | 59 08		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
659	Mar. 29	Kelley	46 29	59 08	Broken field drift ice.
			46 00	59 07	
			45 57	59 14	
660	do	Ice Patrol plane	47 40	51 15	String of field ice.
			and east for 12 miles.		
661	do	Narsarssuak AB	Narsak to seaward.		76 bergs, 50 percent fast ice.
662	do	do	Fjord		6 bergs, 8 bergy bits, 30 percent fast ice.
663	do	do	BW-1 harbor		Clear.
664	do	do	BW-3 harbor		1 berg, 3 bergy bits, 5 growlers, 75 percent fast ice.
			55 35	55 40	Outer boundary of pack 10/10 covered.
			55 28	56 25	
			56 00	57 20	
			56 30	58 40	
665	do	do	Cape Harrison north to 56°15' N. and west to coast.		Close pack with many bergs and growlers in pack.
666	do	do	50 20	52 40	
667	do	do	60 00	51 00	Numerous large bergs.
668	do	do	Kap Desolation to BW-3 thence SE to 50 miles.		Heavy close pack.
669	do	do	Fjord Simiutak to Narsak.		Many bergs and growlers in consolidated pack.
670	do	do	Tinnugdliarfik harbor.		Close pack.
671	do	do	47 56	46 50	Grease ice.
672	Mar. 30	Mormac dawn	59 50	47 20	Berg (same as No. 645).
673	do	Narsarssuak AB	extending NW-SE 18 miles wide.		
674	do	do	59 55	47 24	Polar winter ice, 9/10 covered many bergs and growlers.
			and to coast.		
675	do	do	Coastline vicinity Julianehaab.		Polar winter ice 4/10 covered.
676	do	do	Simiutak to Narsak		Do.
677	do	do	Narsak to Narsarsauk.		
678	do	do	Narsak to seaward.		68 bergs, 35 percent close pack ice.
679	do	do	Fjord		4 bergy bits, 10 percent close pack ice
680	do	do	BW-1 harbor		Clear.
681	do	do	BW-3 harbor		3 bergy bits, 7 growlers, brash ice.
682	do	Canadian Department of Transport.	Montreal to Quebec		Navigable with caution.
683	do	do	Fame Point NW to limits of 50-mile visibility.		Clear water.
684	do	do	49 00	63 45	Slush and slob ice.
			to Bird Rocks		
685	do	do	Bird Rocks to Cape Ray.		Clear water.
686	do	do	South coast Newfoundland.		Clear.
			2 miles off Cape North to		
			47 05	59 50	
			46 35	59 00	
687	do	do	45 45	59 05	Heavy field ice.
			to Seatari thence N. along shore blocking Sydney harbor.		
688	do	do	NW from East Point Prince Edward Island.		Band of heavy ice over 30 miles wide.
689	do	do	Cape St. Lawrence to Sea Wolfe Island.		Band of heavy ice 25 miles wide.
690	do	do	George Bay		80 to 85 percent covered.
691	do	do	Cape George to Point Prim.		Clear.
692	do	do	Cape George to Pictou.		Band close pack 2 miles wide.
693	do	do	Point Prim to West Point.		30 percent cover loose ice.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
694	Mar. 30	Canadian Department of Transport.	30 miles to N. and E. of North Point.	85 percent cover.	
695	---do---	---do---	10 miles off North Point to Miscou.	Scattered patches.	
696	Mar. 31.	Cyrus Field	48 09 | 48 38	Large berg.	
697	---do---	Sheldrake	47 43 | 52 33	Berg (same as No. 641).	
			64 40 | 56 30		
698	---do---	Sondrestrom AB	65 00 | 55 40	Pack boundary.	
			66 30 | 54 45		
			67 00 | 54 35		
699	---do---	---do---	65 15 | 56 00	Many bergs in area.	
700	Apr. 1.	Nova Scotia	47 37 | 52 24	Large berg (same as No. 697).	
701	---do---	Godafoss	48 05 | 45 55	Small berg.	
702	---do---	Canadian Department of Transport.	Montreal to Quebec.	Navigable with caution.	
703	---do---	---do---	Quebec to Fame Point.	Scattered ice.	
			49 07 | 63 55		
704	---do---	---do---	to 10 miles off Bird Rocks.	Newly formed slob with some heavy pieces.	
705	---do---	---do---	Bird Rocks to St. Paul Island to Cape Ray.	Clear.	
706	---do---	---do---	South and west coasts Newfoundland to Cape Ray.	Do.	
			St. Paul Island to 46 50 | 59 00		
			46 50 | 58 50		
707	---do---	---do---	45 35 | 59 20	Field ice limits.	
			to Scatari Island to Sydney Harbor to Ingonish.		
708	---do---	---do---	Strait of Canso causeway to Mulgrave.	Heavy drift ice.	
709	---do---	---do---	George Bay	85 percent cover.	
710	---do---	---do---	North Point to East Point.	Heavy ice.	
711	---do---	---do---	Eastward from Bonaventure Island of 30-mile visibility.	Strings loose drift.	
712	---do---	Cyrus Field	48 08 | 48 45	Heavy field ice.	
			running 110° and 290° from position.		
713	---do---	---do---	48 07 | 48 33	Large berg.	
714	---do---	---do---	48 12 | 48 47	Do.	
715	---do---	Valdez	47 39 | 52 26	Large berg (same as No. 700).	
716	---do---	Johnson	48 27 | 45 40	Growler.	
717	---do---	---do---	48 08 | 46 00	Small berg.	
718	---do---	---do---	47 37 | 46 36	Berg.	
719	---do---	---do---	47 39 | 46 53	Do.	
720	---do---	---do---	47 45 | 46 34	Do.	
721	---do---	---do---	47 51 | 46 36	Berg (same as No. 672).	
			47 48 | 46 48		
722	---do---	---do---	47 26 | 46 54	Field ice.	
			thence NW.		
723	---do---	Godafoss	48 44 | 43 07	Berg.	
724	---do---	---do---	48 26 | 44 01	Berg (same as No. 655).	
725	---do---	Ice Patrol plane	47 09 | 46 04	Berg.	
726	---do---	---do---	47 27 | 46 50	Do.	
727	---do---	---do---	47 28 | 46 25	Do.	
728	---do---	---do---	47 33 | 46 03	Do.	
729	---do---	---do---	47 42 | 46 28	Do.	
730	---do---	---do---	47 42 | 52 34	Berg (same as No. 715).	
731	---do---	---do---	47 45 | 46 34	Berg.	
732	---do---	---do---	47 50 | 47 31	Do.	
733	---do---	---do---	47 58 | 47 48	Do.	
734	---do---	---do---	48 00 | 46 55	Do.	
735	---do---	---do---	48 02 | 48 16	Do.	
736	---do---	---do---	48 06 | 48 10	Do.	
737	---do---	---do---	48 00 | 48 38	Do.	
738	---do---	---do---	48 10 | 46 03	Do.	

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
739	Apr. 1.	Ice Patrol plane	48 10	49 32	Do.
740	do.	do.	48 12	49 22	Do.
741	do.	do.	48 13	48 33	Do.
742	do.	do.	48 15	48 05	Do.
743	do.	do.	48 17	47 51	Do.
744	do.	do.	48 24	44 10	Berg (same as No. 724).
745	do.	do.	48 37	51 14	Berg.
746	do.	do.	48 40	50 20	Do.
747	do.	do.	48 45	51 06	Do.
748	do.	do.	48 48	50 36	Do.
749	do.	do.	47 32	46 52	Growler.
750	do.	do.	47 40	47 50	Do.
751	do.	do.	48 12	48 22	Do.
752	do.	do.	48 15	48 19	Do.
753	do.	do.	48 21	45 32	Do.
			48 30	52 20	
			48 00	to 52 20	
			48 00	to 49 18	
754	do.	do.	47 40	to 49 05	Field ice.
			47 38	to 47 07	
			46 57	to 46 11	
			to NW.		
755	Apr. 2	Gander ATC	48 00	47 31	Berg.
756	do.	Godafoss	47 46	47 22	2 bergs (same as No. 644).
757	do.	do.	47 52	46 51	Berg.
758	do.	do.	47 47	47 27	Field ice.
759	do.	U. S. C. G. Cutter Coos Bay.	47 30	42 33	Radar target, possible berg.
760	do.	Narsarsuak AB	Narsak to seaward.		63 bergs, 50 percent close pack.
761	do.	do.	Fjord		80 percent close pack ice.
762	do.	do.	BW-1 harbor		Loose pack.
763	do.	do.	BW-3 harbor		2 bergy bits, 8 growlers, 50 percent close pack, 50 percent skim.
764	do.	Ice Patrol plane	47 57	47 32	Large berg (same as No. 733).
765	do.	do.	48 00	48 14	Medium berg.
766	do.	do.	48 10	48 17	Large berg.
767	do.	do.	48 13	50 00	Do.
768	do.	do.	48 15	50 29	Medium berg.
769	do.	do.	48 17	48 00	Large berg.
770	do.	do.	48 17	49 20	Medium berg.
771	do.	do.	48 18	50 28	Do.
772	do.	do.	48 18	50 38	Large berg.
773	do.	do.	48 23	43 54	Large berg (same as No. 744).
774	do.	do.	48 23	48 38	Small berg.
775	do.	do.	48 28	50 05	Medium berg.
776	do.	do.	48 30	50 46	Large berg.
777	do.	do.	48 30	52 20	Do.
778	do.	do.	48 32	50 18	Medium berg.
779	do.	do.	48 35	50 28	Small berg.
780	do.	do.	48 35	50 36	Medium berg.
781	do.	do.	48 36	51 43	Large berg.
782	do.	do.	48 38	52 12	Small berg.
783	do.	do.	48 40	49 58	Do.
784	do.	do.	48 40	51 39	Do.
785	do.	do.	48 42	53 10	Large berg.
786	do.	do.	48 45	50 10	Do.
787	do.	do.	48 45	53 10	Do.
788	do.	do.	48 50	52 08	Do.
789	do.	do.	48 50	51 34	Do.
790	do.	do.	48 52	50 06	Medium berg.
791	do.	do.	48 53	50 18	Do.
792	do.	do.	48 58	50 33	Do.
793	do.	do.	48 58	52 40	Large berg.
794	do.	do.	49 01	50 50	Small berg.
795	do.	do.	49 02	51 56	Large berg.
796	do.	do.	49 03	50 32	Medium berg.
797	do.	do.	49 05	50 15	Berg and growler.
798	do.	do.	49 12	50 41	Large berg.
799	do.	do.	49 14	50 50	Berg and growler.
800	do.	do.	49 16	49 46	Large berg.
801	do.	do.	49 36	51 00	2 bergs.
802	do.	do.	49 39	51 12	Large berg.
803	do.	do.	48 03	48 47	Growler.
804	do.	do.	48 37	42 58	Growler (same as No. 723).
805	do.	do.	48 47	50 43	Do.
806	do.	do.	49 31	50 55	Do.
807	do.	do.	49 33	50 15	Do.
808	do.	do.	49 35	49 43	Do.
809	do.	do.	49 37	49 35	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° / °	° / °	
810	Apr. 2	Ice Patrol plane.	49 20	53 05	Field ice.
			to		
			48 45	52 30	
			to		
			48 20	52 50	
			to		
			48 00	51 40	
			to		
			47 50	47 25	
			to		
			48 35	48 25	
			to		
			48 45	49 20	
			to		
			thence north.		
811	do	Italia	46 20	47 03	Patch light field ice.
812	do	Cyrus Field	47 38	52 18	Berg.
			Bird Rocks to St. Paul Island to 10 miles off Cape St. Lawrence to		Field ice.
813	do	Canadian Department of Transport.	47 05	59 25	
			to		
			46 30	58 40	
			to		
			45 50	58 50	
			to		
814	do	do	45 35	59 35	Clear.
			St. Paul Island to Cape Ray.		
815	do	do	Sydney Harbor.		Do.
816	do	do	Montreal to Quebec.		Navigable with caution.
817	do	do	South and west coasts Newfoundland to Point Rich.		Clear.
818	do	do	49 07	63 55	Do.
			to		
819	do	do	48 35	62 40	Slob and loose drift ice.
			48 35	62 40	
			to Bird Rock Strait of Canso.		Blocked.
820	do	do	George Bay.		Full.
821	do	do	St. Peters to Borden.		25 percent coverage.
822	do	do	Buetouche to Shipigan.		Clear.
823	do	do	Bonaventure Island SE. to limit of 20-mile visibility.		Slob and scattered drift.
824	do	do	Narsak to seaward.		66 bergs, 50 percent pack ice.
825	do	Narsarsuak A.B.	Fjord.		2 bergy bits, 30 percent pack ice.
826	do	do	BW-1 harbor.		Loose pack ice.
827	do	do	BW-3 harbor.		4 bergy bits, 6 growlers, 50 percent pack ice.
828	do	do	18 miles South Cape Farewell to		Southern ice limits off SW Greenland.
			59 40	44 00	
			to		
829	do	Hydro	59 50	45 00	
			to		
			60 00	47 00	
			to		
			61 00	48 00	Radar target possible berg (same as No. 811).
830	Apr. 3	Nova Scotia	47 38	52 15	
831	do	Cyrus Field	47 59	52 21	Berg.
			48 33	52 31	
832	do	do	to		Heavy field ice.
833	do	do	48 25	51 50	Large berg.
			48 36	52 16	
834	do	Nova Scotia	47 04	47 18	Small berg.
835	do	do	47 05	47 26	Berg (same as No. 719).
836	do	do	47 09	47 17	5 bergs and numerous growlers.
837	do	do	47 11	47 26	Berg (same as No. 721).
838	do	do	47 25	47 10	2 bergs (same as No. 756).
839	do	do	46 53	47 18	Large berg (same as No. 725).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
840	April 3...	Nova Scotia	47 35 47 17 47 10 47 00	48 30 48 02 47 32 47 14	Large patches loosely packed field ice.
841	do	do	46 55	47 08	
842	do	do	46 53	47 03	
843	do	Manchester Regiment	47 06	47 12	
844	Apr. 4	Nova Scotia	46 20	46 48	9 growlers.
845	do	do	47 55	43 30	Field ice and growlers.
846	do	TWA plane	47 54	43 12	Radar target, possible berg.
847	do	Empress of France	49 30	52 22	Small growler.
848	do	do	46 27	46 22	3 bergs.
849	do	Mormac Star	46 28	46 20	Growler.
			46 33	59 33	Patch field ice.
			Cape North to		Field ice.
850	do	Cornerbrook	47 04	59 35	
			46 50	59 35	Heavy close pack ice.
851	Apr. 5	Ice Patrol plane	46 50	60 10	
852	do	do	46 49	46 44	Small berg (same as No. 839).
853	do	do	47 08	46 45	Small berg (same as No. 835).
854	do	do	47 09	46 51	Small berg (same as No. 837).
855	do	do	47 15	46 51	Small berg (same as No. 836).
856	do	do	47 12	45 58	Large berg (same as No. 836).
857	do	do	47 16	46 05	Do.
858	do	do	47 26	46 05	Medium berg (same as No. 836).
859	do	do	47 30	46 20	Large berg (same as No. 836).
860	do	do	47 31	46 31	Medium berg.
861	do	do	47 38	46 20	Large berg.
862	do	do	47 50	46 36	Medium berg.
863	do	do	47 55	45 38	Do.
864	do	do	47 57	46 20	Small berg.
865	do	do	48 00	46 32	Large berg.
866	do	do	48 04	45 28	Do.
867	do	do	48 05	44 17	Small berg.
868	do	do	48 07	45 38	Berg and 2 growlers.
869	do	do	48 08	47 08	Medium berg.
870	do	do	48 08	45 24	Large berg.
871	do	do	48 12	45 32	Do.
872	do	do	48 18	46 55	Medium berg.
873	do	do	48 20	47 06	Large berg.
874	do	do	48 21	49 22	Small berg.
875	do	do	48 23	48 27	2 bergs, 1 growler.
876	do	do	48 25	45 00	Large berg.
877	do	do	48 26	46 24	Do.
878	do	do	48 28	48 47	Do.
879	do	do	48 29	51 30	Do.
880	do	do	48 29	48 30	Do.
881	do	do	48 30	48 38	Do.
882	do	do	48 38	49 28	Do.
883	do	do	48 40	48 05	Do.
884	do	do	48 40	48 42	2 bergs.
885	do	do	48 40	49 18	Do.
886	do	do	48 40	53 10	Do.
887	do	do	48 42	48 31	Large berg.
888	do	do	48 42	49 52	Do.
889	do	do	48 50	50 55	Do.
890	do	do	48 45	43 07	Small berg.
891	do	do	47 05	46 14	Growler.
892	do	do	47 08	46 11	2 growlers.
893	do	do	46 58	46 16	Very small growler.
894	do	do	46 59	46 02	Do.
895	do	do	47 22	46 34	Growler.
896	do	do	47 25	46 20	Do.
897	do	do	47 30	46 04	Do.
898	do	do	47 40	42 58	Do.
899	do	do	48 09	47 16	Do.
900	do	do	48 12	46 28	Do.
901	do	do	48 20	52 07	Do.
902	do	do	48 25	46 48	Do.
903	do	do	48 27	48 00	2 growlers.
904	do	do	48 33	45 41	Growler.
905	do	do	48 33	47 13	Do.
906	do	do	48 38	42 50	Do.
			48 41	47 12	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
907	Apr. 5	Ice Patrol plane.....	48 58 48 35 48 40 48 10 48 00 47 15 47 15 47 40 48 00 48 30 thence NW.	51 48 50 50 49 40 48 40 47 10 47 05 46 00 46 00 45 30 48 00	Limits of field ice.
908	...do....	Canadian Department of Transport.	Montreal to Quebec.		Navigable with caution.
909	...do....	...do.....	Quebec to St. Jean Orleans.		Much broken ice.
910	...do....	...do.....	St. Jean Orleans to Fame Point to 20 miles east of Bird Rocks to St. Pauls Island.		Scattered drift.
911	...do....	...do.....	St. Pauls Island to 46 55 to 47 05 to 46 30 to 45 50 to 45 55 to Cape North	59 30 58 50 58 20 57 50 58 50	Field ice limits.
912	...do....	...do.....	Strait of Canso.....		60 percent cover.
913	...do....	...do.....	George Bay.....		Heavy rafted ice.
914	...do....	...do.....	George Bay to Cheticamp Point.		Narrow strip ice 1-3 miles wide.
915	...do....	...do.....	5 miles west of Cheticamp Point to East Point.		Clear.
916	...do....	...do.....	Cheticamp Point to limit of 40-mile visibility.		Loose drift.
917	...do....	...do.....	20 miles north of Prince Edward Island to Deadman Island.		Do.
918	...do....	...do.....	West coast Magdalen Island to Bird Rock and west to end of 40-mile visibility.		Large field slob and loose drift.
919	...do....	Narsarssuak AB.....	Narsak to seaward.		37 bergs, some field ice.
920	...do....	...do.....	BW-1 harbor.....		Clear.
921	...do....	...do.....	BW-3 harbor.....		1 bergy bit, 8 growlers, 50 percent close pack ice.
922	...do....	Unknown plane.....	49 30 49 30	52 08 51 30	Large berg.
923	...do....	...do.....	50 05 49 00 49 00	48 45 50 25 51 00	50 to 60 percent field ice cover.
924	...do....	TWA 915.....	49 00	50 25	Berg.
925	...do....	...do.....	49 00	51 00	Do.
926	Apr. 6	Narsarssuak AB.....	BW-1 harbor.....		Clear.
927	...do....	...do.....	BW-3 harbor.....		1 berg, 3 bergy bits, 10 growlers, 100 percent skim ice cover.
928	...do....	Cyrus Field.....	46 06 thence N. and S. 15 miles.	57 45	Eastern limits field ice.
929	...do....	Newfoundland.....	47 14	46 36	Medium berg (same as No. 852).
930	...do....	...do.....	47 14	46 39	Berg (same as No. 853).
931	...do....	...do.....	47 19	46 47	Small berg (same as No. 854).
932	...do....	...do.....	47 22	45 52	Small berg (same as No. 856).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
933	Apr. 6	Newfoundland.....	47 27	46 08	Small berg (same as No. 858).
934	..do..	..do..	47 30	45 56	Small berg (same as No. 857).
935	..do..	..do..	47 18	46 05	Growler.
936	..do..	..do..	47 20	45 52	Do.
937	..do..	..do..	47 21	46 10	3 growlers.
938	..do..	..do..	47 21	46 15	Growler.
939	..do..	..do..	47 25	45 36	Do.
			47 16	46 42	
940	..do..	..do..	47 16 to thence N.	46 26	String field ice.
941	..do..	Ice Patrol plane.....	47 07	47 10	Small berg.
942	..do..	Ciandra.....	46 36	59 41	Field ice.
943	..do..	Canadian Department of Transport.	Montreal to Que- bec.		Navigable with caution.
944	..do..	..do..	Quebec to Goose Cape.		Much broken ice.
945	..do..	..do..	Fame Point along steamer track to Bird Rocks to St. Paul Island.		Scattered field ice.
946	..do..	..do..	West coast New- foundland to 30 miles north of Cape St. George.		Clear.
947	..do..	..do..	Strait of Canso.....		60 percent cover.
948	..do..	..do..	George Bay.....		Not navigable.
949	..do..	..do..	Northumberland Strait.		Mostly clear.
950	..do..	..do..	20 miles north of East Point to Magdalen Is- land.		Slob and pancake ice.
951	..do..	..do..	ESE. from north end Magdalen Island to end of 20-mile visibil- ity.		Heavy drift.
952	Apr. 7	Cyrus Field.....	46 00 | 58 50 thence N. and S. for 12 miles.		Extensive strings of field ice.
953	..do..	..do..	46 05 | 58 41 thence NW. and SE. to limit of 10- mile visibility.		Heavy slob ice.
954	..do..	Canadian Department of Transport.	Montreal to Que- bec.		Navigable with caution.
955	..do..	..do..	Quebec to St. Jean.		60 percent broken ice.
956	..do..	..do..	St. Jean to Fame Point.		Scattered ice.
957	..do..	..do..	Steamer track from Fame Point to 30 miles NE. Bird Rock.		Scattered field ice and slob.
958	..do..	..do..	Bird Rock to 20 miles NE. St. Pauls Island.		Isolated strings and patches.
959	..do..	..do..	East and south coasts Cape Breton.		Clear.
960	..do..	..do..	North coast Prince Edward Island to 15 miles south Deadman Is- land.		Do.
961	..do..	..do..	Amherst Island north along west coast Magdalen Island.		Close pack 5-8 miles wide.
962	..do..	..do..	Strait of Canso.....		Blocked.
963	..do..	Narsarsuak A B	Narsak to seaward.		68 bergs, 20 percent drift ice.
964	..do..	..do..	Fjord.....		100 percent pack ice.
965	..do..	..do..	BW-1 harbor.....		Clear.
966	..do..	..do..	BW-3 harbor.....		1 berg, 1 bergy bit, 16 growlers, brash ice.
967	Apr. 8	..do..	Narsak to seaward.		84 bergs, 60 percent close pack.
968	..do..	..do..	Fjord.....		95 percent consolidated pack.
969	..do..	..do..	BW-1 harbor.....		Clear.
970	..do..	..do..	BW-3 harbor.....		Berg, 3 growlers, 40 percent young ice.
			47 59 | 60 20 to		
971	..do..	Canadian Department of Transport.	48 04 | 60 32 to		Strings of slob ice.
			48 13 | 61 02		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
972	Apr. 8...	Canadian Department of Transport.	48 02	60 23	Heavy field ice.
			48 07	60 28	
			48 06	60 52	
973	do	do	48 07	61 05	Patches field ice.
974	Apr. 9	Imperial Halifax.	46 20	58 40	Loose string field ice.
975	do	do	47 00	59 00	Do.
976	do	Canadian Department of Transport.	Montreal to Three Rivers.		Considerable broken ice.
977	do	do	Batiscan	to St. Jean.	Light broken ice.
978	do	do	Goose Cape to Fame Point to Bird Rock to St. Paul Island to Cape North.		Scattered ice.
979	do	do	Along shore Cape North to Henry Island.		Narrow strip ice.
980	do	do	Straight of Canso.		Rapidly moving ice.
981	do	do	George Bay.		Not navigable.
982	do	do	Northumberland Strait.		Navigable with caution.
983	do	do	Miscou Island to 10 miles off coast.		Field loose ice.
984	Apr. 10	do	Montreal to St. Jean.		Much broken ice.
985	do	do	St. Jean to Fame Point.		Scattered ice.
986	do	do	Fame Point to Bird Rock to St. Paul Island.		Clear.
987	do	do	South and west coast Newfoundland to Bay of Islands.		Do.
988	do	do	47 00	59 30	Scattered field ice.
			46 00	59 20	
989	do	do	Along shore Cape North to Henry Island.		Narrow strip ice.
990	do	do	Strait of Canso.		Considerable drift ice, in motion.
991	do	do	Northumberland Strait.		Mostly clear.
992	do	Ice Patrol plane	47 17	44 32	Large berg (same as No. 932).
993	do	do	47 27	44 33	Small berg (same as No. 934).
994	do	do	47 45	44 52	Medium berg (same as No. 862).
995	do	do	47 50	46 20	Large berg.
			47 52	46 38	
996	do	do	47 48	46 55	Limits of field ice.
			47 55	47 11	
			thence NW.		
997	do	USN plane	Cape Harrison area.		10/10 cover.
998	do	do	55 30	58 45	8/10 cover.
			56 00	58 45	
999	do	do	56 15	59 00	6/10-9/10 cover.
			56 35	59 00	
1000	do	do	56 55	59 10	Many bergs, growlers.
			Hebran to		
1001	do	do	56 30	59 00	6/10-10/10 cover, many bergs, growlers
1002	do	do	Saglek Bay.		
			58 45	62 30	10/10 cover, few bergs.
1003	do	do	59 30	61 30	10/10 cover many narrow NE-SW leads and cracks.
			59 35	61 30	
1004	do	do	65 to 90 miles off shore 60°00' N.		Few bergs.
1005	do	do	to 59°00' W.		Pack boundary.
1006	do	do	60 19	63 15	9/10 cover, small cracks ridges all directions, many polyni.
			60 20	64 00	
1007	do	do	Area around Button Islands.		Open water.
			60 25	65 00	
1008	do	do	60 30	64 15	8/10 cover.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North	West	Description
			latitude	longitude	
			° /	° /	
1009	Apr. 10	USN plane	60 15	65 15	{ 10/10 cover.
			to		
			60 25	65 00	{ 10/10 cover, many cracks and ridges all
			59 30	66 30	
1010	do	do	to		{ directions.
			59 55	66 00	
			59 30	67 30	{ 10/10 cover.
			to		
1011	do	do	59 10	67 30	{ 9/10 cover.
			59 45	68 00	
1012	do	do	60 25	68 30	{ Do.
1013	do	do	61 00	69 15	
1014	do	do			{ 9/10 cover, many small polyni along
			62 25	70 40	{ coastal islands. Few bergs, growlers.
			to		
1015	do	do	62 00	70 15	{ 10/10 cover.
			62 30	73 05	
1016	do	do			{ 10/10 cover, ridges and cracks all direc-
			62 30	72 20	
1017	do	do	to		{ tions.
			62 30	71 10	
1018	do	do	East coast Charles		{ Open water.
			Island.		
1019	do	do	62 30	74 00	{ 10/10 cover, many refreezing cracks and
			63 10	71 40	{ Do.
			to		
1020	do	do	62 30	74 00	{ 10/10 pack ice, snow cover.
			63 40	68 30	
1021	do	do	48 02	43 00	{ Berg.
			46 47	43 39	
1022	Apr. 11	Rushwood	47 10	58 55	{ Light open field ice.
		Prins Frederik Willem	47 24	43 23	
1023	do	Beaverlodge	47 50	46 45	{ Growler.
		Rialto	47 53	45 10	
1024	do	Ice patrol plane	47 55	44 58	{ Large berg.
		do	47 57	47 06	
1025	do	do	47 58	45 10	{ Small berg.
			48 08	46 30	
1026	do	do	48 08	47 59	{ Do.
			48 10	46 44	
1027	do	do	48 18	46 39	{ Medium berg.
			48 22	52 42	
1028	do	do	48 26	48 05	{ Do.
			48 26	49 30	
1029	do	do	48 30	47 09	{ Do.
			48 32	46 09	
1030	do	do	48 36	47 14	{ Large berg.
			48 40	48 10	
1031	do	do	48 47	48 10	{ Do.
			47 52	44 57	
1032	do	do	47 52	47 02	{ Growler.
			48 00	46 45	
1033	do	do	48 00	47 16	{ Do.
			48 10	46 45	
1034	do	do	48 50	49 40	{ Do.
			to		
			48 30	49 30	{ Field ice.
			to		
			47 50	46 55	{ thence NW.
			48 15	46 55	
1048	do	do			{ Large berg.
			47 55	44 11	
1049	do	Mont Gaspe	48 03	44 11	{ Do.
		do			
1050	do	Canadian Department of	Straits of Canso		{ Little ice left.
		Transport.			
1051	do	Danaholm	7 miles east of St.		{ Few small pieces ice.
			Paul Island to 8		
			miles east Bird		{ Rocks.
1052	do	do	46 30	59 30	{ Large growler.
			46 33	59 36	
1053	do	Fort Avalon	47 37	59 52	{ Strings light field ice.
		do	47 07	44 50	
1054	Apr. 12	Paparoa	47 22	44 42	{ Berg (same as No. 992).
		Grindefjell	47 32	44 19	
1055	do	do	46 39	43 53	{ Berg (same as No. 993).
		do			
1056	do	Empress of France	Montreal		{ Berg (same as No. 994).
		Canadian Department of	to Sorel		
		Transport.			{ Navigable with caution.
1057	do	do	Sorel		{ Broken to scattered ice.
			Point.		
1058	do	do	Fame		{ Clear.
			Point		
1059	do	do	to		{ Bird
			Rocks.		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1063	Apr. 12	Canadian Department of Transport.	Brion Island to 48 00 | 61 10		Scattered field ice.
1064	do	do	47 47 | 60 18		Patch field ice.
1065	do	do	10 miles east of St. Paul Island.		Icefield, 10 miles wide, 20 miles long.
1066	do	do	46 30 | 59 36		Strings field ice.
1067	do	do	Alongshore, Henry Island to Sea Wolf Island.		Narrow strip field ice.
1068	do	do	Northumberland Strait.		Navigable throughout.
1069	do	do	North coast Prince Edward Island to Grindstone.		Clear.
1070	Apr. 13	U. S. C. G. Cutter Evergreen.	47 28 | 47 03		Berg (same as No. 1029).
1071	do	Oslofjord	45 30 | 48 40		Ice flakes.
1072	do	Narsarssuak AB	Narsak to seaward.		110 bergs, 10 percent drift ice.
1073	do	do	Fjord		2 bergs, 9 bergy bits.
1074	do	do	BW-1 harbor		Clear.
1075	do	do	BW-3 harbor		1 bergy bit, 1 growler.
1076	do	Canadian Department of Transport.	Montreal to Sorel		Navigable during daylight.
1077	do	do	Sorel to St. Jean Orleans.		Heavy broken ice.
1078	do	do	St. Jean Orleans to Fame Point.		Scattered ice.
1079	do	do	Fame Point to Bird Rocks to St. Paul Island to Cape Ray.		Clear.
1080	do	do	South and west coasts Newfoundland to Bay of Islands.		Do.
1081	do	do	47 10 | 59 35 to		Narrow string field ice.
1082	do	do	46 40 | 59 40		
1083	do	Hydro	Strait of Canso		80 percent cover, ice moving to south.
			From BW-3 harbor to seaward 30 miles.		8/10 cover, many bergs.
1084	do	do	Entrance Skovfjord to BW-1.		Scattered brash, some bergs.
1085	do	do	Hudson Strait from Charles Island to month.		9/10-10/10 cover, few bergs.
1086	do	do	Cape Chidley to Cape Harrison.		Pack boundary more than 90 miles offshore. Concentration 9/10 to 10/10. Many bergs in pack. 3 growlers, long strip brash. Radar target, probable berg. Berg.
1087	Apr. 14	Calanda	47 30 | 46 30		3 growlers, long strip brash.
1088	do	U. S. C. G. cutter Evergreen.	47 50 | 46 17		Radar target, probable berg.
1089	do	Empress of Australia	47 56 | 46 05		Berg.
			Within 5 miles radius of		
1090	do	U. S. C. G. cutter Evergreen.	47 56 | 46 22		Numerous radar targets, probable bergs.
1091	do	do	48 03 | 45 55		Radar target, probable berg.
1092	do	U. S. C. G. cutter Castle Rock.	48 24 | 47 10		Berg.
1093	do	do	48 32 | 46 53		Do.
1094	do	do	48 36 | 46 54		Do.
1095	do	do	48 38 | 46 50		Do.
1096	do	do	48 41 | 46 42		Growler.
1097	do	do	48 44 | 46 51		Berg.
1098	do	do	48 44 | 46 28		Do.
1099	do	do	48 55 | 46 41		Growler.
1100	do	do	50 00 | 46 20		Berg.
1101	do	Opequon	46 29 | 59 42		Narrow strip field ice.
1102	do	do	46 59 | 59 55		Scattered field ice.
1103	do	Empress of Australia	47 44 | 46 10		Strings close ice.
			and south.		
1104	do	Narsarssuak AB	Narsak to seaward.		73 bergs, drift ice.
1105	do	do	Fjord.		1 growler.
1106	do	do	BW-1 harbor		Clear.
1107	do	do	BW-3 harbor		1 bergy bit, 25 percent skim ice.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' /	° ' /	
1108	Apr. 14	Goose Bay AB.....	49 25	51 00	Pack boundary.
			to		
			50 10	51 45	
1109	do	do.....	50 30	51 20	Few N-S, belts.
			50 35	51 45	
			50 43	53 00	
1110	do	do.....	51 00	53 00	NW.-SE. belts.
			51 10	53 30	
			to		
1111	do	do.....	51 25	54 30	Do.
			51 32	54 56	
			to		
1112	do	do.....	52 00	55 16	Do.
			West coast Belle Isle.		
			53 15	55 15	
1113	do	do.....	54 40	57 00	Few bergs.
			51 00	55 25	
			to		
			51 06	55 10	
			to		
			50 59	55 00	
1116	do	Sondrestrom AB.....	50 08	54 28	Ice belt 10/10 cover.
			to		
			50 25	54 50	
			to		
			50 40	55 10	
			to Bell Island.		
			Cape St. Charles		
			to		
			51 55	55 43	
1117	do	do.....	51 43	55 00	Inner boundary pack ice.
			to		
			51 00	54 24	
			to		
			49 40	54 05	
			52 40	52 45	
			to		
			53 00	52 30	
			to		
			53 05	53 00	
			to		
			53 35	53 15	
			to		
			55 30	56 10	
			to		
			55 55	57 20	
			to		
			56 30	58 05	
			to		
			57 00	58 23	
			to		
1118	do	do.....	57 30	59 30	Outer boundary pack ice.
			to		
			58 00	59 20	
			to		
			58 30	59 10	
			to		
			58 45	59 20	
			to		
			59 00	59 02	
			to		
			59 30	59 45	
			to		
			60 00	59 22	
			to		
			60 30	59 15	
			to		
			61 40	58 25	
			to		
			62 15	57 45	Berg.
			47 10	47 00	
1119	Apr. 15	U. S. C. G. cutter Cook Inlet.	47 10	46 57	
1120	do	Empress of Australia.....	47 49	46 27	Berg (same as No. 1119).
1121	do	do.....	47 37	46 27	Berg (same as No. 1090).
1122	do	do.....	and to	ESE.	Loose strings of field ice.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1123	Apr. 15	U. S. C. G. cutter Evergreen.	48 56	46 39	Berg and 2 growlers.
1124	do	U. S. C. G. cutter Cook Inlet.	47 54	46 02	Radar target possible berg.
1125	do	do	48 07	46 20	Berg.
1126	do	do	48 10	46 15	Do.
1127	do	do	48 15	46 00	Do.
1128	do	do	48 30	45 47	Do.
1129	do	do	48 35	46 14	Do.
1130	do	do	48 35	46 20	Do.
1131	do	do	48 38	46 12	Do.
1132	do	do	48 39	46 00	Do.
1133	do	do	48 42	46 23	Do.
1134	do	do	48 43	45 51	Do.
1135	do	do	48 43	46 30	2 bergs.
1136	do	do	48 46	43 35	Berg.
1137	do	do	48 49	46 03	Do.
1138	do	do	48 50	46 15	Do.
1139	do	do	49 10	46 23	Do.
1140	do	do	48 11	46 11	Growler.
1141	do	do	48 45	46 20	Do.
1142	do	do	48 50	46 29	Do.
1143	do	do	48 51	46 28	Do.
1144	do	do	48 59	46 26	Do.
1145	do	Monica Smith	48 02	43 33	Do.
1146	do	do	48 07	43 22	Do.
1147	do	do	48 09	42 54	Do.
1148	do	Ice Patrol plane	47 04	47 03	Berg (same as No. 1120).
1149	do	do	47 22	44 32	Berg.
1150	do	do	47 30	44 15	Do.
1151	do	do	47 46	46 22	Berg (same as No. 1090).
1152	do	do	47 52	45 56	Berg (same as No. 1089).
1153	do	do	47 59	46 25	Berg.
1154	do	do	48 02	47 41	Do.
1155	do	do	48 03	46 00	Do.
1156	do	do	48 11	45 28	Do.
1157	do	do	48 17	48 35	Do.
1158	do	do	48 19	47 49	Do.
1159	do	do	48 20	47 35	Do.
1160	do	do	48 21	46 48	Do.
1161	do	do	48 25	46 52	Do.
1162	do	do	{ Within 20-mile radius of		{ 15 bergs.
			48 26	46 12	
1163	do	do	48 34	48 22	Berg.
1164	do	do	47 23	46 32	Growler.
1165	do	do	48 00	45 45	Do.
1166	do	do	48 04	45 32	Do.
1167	do	Monica Smith	47 30	44 30	Do.
1168	do	do	47 34	44 29	Do.
1169	do	Beaverglen	46 49	47 03	Berg (same as No. 1148).
1170	do	TWA aircraft	49 52	48 08	3 large bergs and several small bergs.
1171	do	Brunswick	47 27	46 32	Berg.
1172	do	Cornwood	46 23	50 30	{ Strings of field ice.
			{ and 10 miles to ESE.		
			49 25	51 00	{ Pack boundary.
1173	do	Goose Bay AB	50 18	51 45	
			50 30	51 20	{ Pack boundary.
			49 35	51 00	
1174	do	do	{ to		{ Few bergs.
			49 55	51 05	
			66 38	54 50	{ Few bergs.
			67 00	54 45	
			67 30	54 50	{ Few bergs.
			67 53	55 00	
			68 02	54 40	{ Pack boundary.
1175	do	Thule AB	68 40	54 00	
			69 00	54 00	{ Pack boundary.
			69 23	56 00	
			69 42	56 00	{ Pack boundary.
			69 55	54 40	

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1176	Apr. 15	Thule AB	66 40	56 00	Heavy concentration bergs.
1177	do.	do.	Area SW of Disko Island.		Do.
1178	do.	do.	Vicinity Upernivik.		Do.
1179	do.	do.	Vicinity Bushnan Islands and Cape York to Conical Rock.		Do.
1180	do.	do.	West coast Belle Isle.		Few bergs.
1181	do.	do.	53 15 | 55 15		Do.
1182	Apr. 16	Canadian Department of Transport.	Three Rivers to Quebec.		Much broken ice.
1183	do.	do.	Quebec to Fame Point.		Scattered ice.
1184	do.	Ryholm	48 12 | 45 10		Large growler.
1185	do.	Newfoundland	47 13 | 44 03		Berg (same as No. 1149).
1186	do.	do.	47 17 | 43 55		Berg (same as No. 1150).
1187	do.	U. S. N. S. Johnson	46 22 | 59 28 { and east 10 miles.		Field ice.
1188	do.	Oris	46 24 | 47 10		Berg (same as No. 1169).
1189	do.	Germa	48 31 | 45 35		Large berg.
			Few miles offshore from Upernivik to Disko Island at 70°00' N. to 20 miles offshore Egedseminde to		
			68 40 | 54 00		
			62 20 | 57 40		
1190	do.	Hydro	57 30 | 59 00		Pack boundary.
			54 00 | 53 45		
			51 00 | 51 00		
			49 00 | 51 30		
			50 00 | 51 30		
			50 00 | 54 00		
1191	Apr. 17	Zuiderkruis	46 10 | 47 30		Berg (same as No. 1188).
1192	do.	Canadian Department of Transport.	Montreal to Quebec to Orleans Island.		Clear.
1193	do.	U. S. S. PCEC 877	45 58 | 59 30		Strip scattered field ice 2 miles long.
1194	do.	Narsarsuak AB	Narsak to seaward.		69 bergs.
1195	do.	do.	Fjord.		Growler some brash.
1196	do.	do.	BW-3 harbor.		Bergy bit.
1197	do.	do.	BW-1 harbor.		Clear.
1198	do.	Laurentia	46 24 | 45 00		Radar target possible berg (same as No. 1059).
1199	Apr. 18	Pan American aircraft	49 36 | 51 28		6 large bergs.
1200	do.	Laurentia	46 05 | 47 37		Radar target possible berg (same as No. 1191).
1201	do.	U. S. C. G. Cutter Bibb	48 26 | 47 21		Radar target possible berg.
1202	do.	do.	48 31 | 47 25		Do.
1203	do.	do.	48 33 | 47 17		Growler.
1204	do.	do.	48 33 | 47 18		Do.
1205	do.	Vandalia	46 01 | 47 47		Medium berg (same as No. 1200).
1206	do.	U. S. C. G. Cutter Bibb	48 22 | 47 16		Radar target possible berg.
1207	do.	do.	48 23 | 47 13		Do.
1208	do.	do.	48 23 | 47 17		Do.
1209	do.	do.	48 24 | 47 11		Do.
1210	do.	U. S. N. S. Johnson	47 22 | 44 32		Berg.
1211	do.	Canadian Department of Transport.	Mulgrave and Canso Straits.		No ice.
1212	do.	U. S. C. G. Cutter Bibb	48 09 | 47 46		Radar target possible berg.
1213	do.	do.	48 11 | 47 31		Do.
1214	do.	do.	48 12 | 47 30		Do.
1215	do.	do.	48 17 | 47 27		Do.
1216	do.	do.	48 18 | 47 15		Do.
1217	Apr. 19	TWA aircraft	49 40 | 48 37		3 bergs.
1218	do.	Sagkat	49 30 | 42 22		4 radar targets possible bergs.
1219	do.	TWA aircraft	49 45 | 49 10		2 bergs.
1220	do.	Navy aircraft	50 miles south of Holsteinsborg.		20 bergs.
1221	do.	Sagkat	47 15 | 46 40		Radar target possible berg (same as No. 1171).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1222	Apr. 20	Krageholm	47 10	47 24	Radar target possible berg.
1223	..do..	Ice Patrol plane	46 01	47 58	Berg.
1224	..do..	Stavangerfjord	48 50	47 17	Radar target possible berg.
1225	..do..	..do..	48 54	46 55	Do.
1226	..do..	..do..	49 02	46 57	Do.
1227	..do..	..do..	49 07	46 50	Do.
1228	..do..	..do..	49 08	46 51	Do.
1229	..do..	..do..	49 09	46 47	Do.
1230	..do..	..do..	49 09	47 00	Do.
1231	..do..	..do..	49 13	46 25	Do.
1232	Apr. 21	Empress of Scotland	46 20	45 44	Radar target possible berg (same as No. 1198).
1233	..do..	Siredal	47 50	45 20	Radar target possible berg.
1234	..do..	Prins Willem Van Oranje	46 07	48 27	Radar target possible berg (same as No. 1205).
1235	..do..	Empress of Scotland	46 11	48 36	Radar target possible berg (same as No. 1234).
1236	..do..	Hoyanger	46 20	48 25	Radar target possible berg (same as No. 1235).
1237	..do..	Stavangerfjord	47 30	48 00	Southern limits of field ice.
1238	..do..	Newfoundland	48 06	50 35	Berg.
			48 09	50 02	
1239	..do..	..do..	47 58	49 55	Field ice.
			48 05	49 15	
			47 55	47 50	
1240	..do..	Hoyanger	46 07	48 28	Berg (same as No. 1236).
1241	..do..	Newfoundland	48 18	46 09	Growler.
1242	..do..	Ice Patrol plane	48 00	48 17	Berg.
1243	..do..	..do..	48 02	49 22	Do.
1244	..do..	..do..	48 03	49 57	Do.
1245	..do..	..do..	48 05	49 18	Do.
1246	..do..	..do..	48 05	49 47	Do.
1247	..do..	..do..	48 05	50 10	Do.
1248	..do..	..do..	48 05	50 37	Do.
1249	..do..	..do..	48 07	49 21	Do.
1250	..do..	..do..	48 07	49 59	Do.
1251	..do..	..do..	48 12	48 53	Do.
1252	..do..	..do..	48 12	49 25	Do.
1253	..do..	..do..	48 14	48 52	Do.
1254	..do..	..do..	48 42	53 08	Do.
1255	..do..	..do..	48 48	44 54	Do.
1256	..do..	..do..	48 55	51 29	Do.
1257	..do..	..do..	49 00	50 29	Do.
1258	..do..	..do..	49 04	45 26	Do.
1259	..do..	..do..	49 23	53 23	Do.
1260	..do..	..do..	49 25	51 07	Do.
1261	..do..	..do..	49 27	50 11	Do.
1262	..do..	..do..	49 27	50 53	Do.
1263	..do..	..do..	49 33	50 29	Do.
1264	..do..	..do..	49 33	51 07	Do.
1265	..do..	..do..	49 34	50 13	Do.
1266	..do..	..do..	49 37	53 07	Do.
1267	..do..	..do..	49 40	50 41	Do.
1268	..do..	..do..	48 26	48 13	Radar target possible berg.
1269	..do..	..do..	48 27	47 56	Do.
1270	..do..	..do..	48 33	47 15	Do.
1272	..do..	..do..	48 41	46 11	Do.
1273	..do..	..do..	48 41	47 17	Do.
1274	..do..	..do..	48 49	45 42	Do.
1275	..do..	..do..	49 08	47 22	Do.
1276	..do..	..do..	49 12	45 17	Do.
1277	..do..	..do..	49 12	45 27	Do.
1278	..do..	..do..	49 26	46 21	Do.
1279	..do..	..do..	49 28	47 17	Do.
1280	..do..	..do..	48 03	49 52	Growler.
1281	..do..	..do..	48 37	45 56	Do.
1282	..do..	..do..	49 03	50 00	Do.
			49 20	51 55	
1283	..do..	..do..	48 00	49 25	Field ice limits.
			48 00	47 40	
			48 40	47 30	
1284	..do..	Queen City	46 06	48 32	Radar target possible berg (same as No. 1240).
1285	..do..	Godafoss	47 43	48 23	2 bergs.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			49 00	52 00	
			49 25	51 00	
			48 40	50 10	
1286	Apr. 21	Goose Bay AB	49 25	49 40	Pack boundary.
			50 20	51 30	
			50 15	50 00	
			50 30	49 10	
			50 30	53 20	
			50 32	52 25	
			51 10	54 00	
1287	do	do	51 00	55 10	Do.
			50 45	55 00	
			50 45	55 25	
			to St. Peter Bay		
1288	Apr. 22	U. S. C. G. Cutter Sebago.	47 32	48 14	2 bergs (same as No. 1285).
1289	do	Montcalm	46 26	47 16	Radar target possible berg (same as No. 1222).
1290	do	U. S. C. G. Cutter Sebago.	47 28	47 14	Berg.
1291	do	do	47 38	47 17	Do.
1292	do	do	47 34	47 12	Growler.
1293	do	Nova Scotia	47 14	47 29	Large berg.
1294	do	do	47 25	47 35	Berg.
1295	do	do	47 22	47 25	Growler.
1296	do	do	47 22	47 31	Do.
1297	do	Navy aircraft	48 07	49 07	Berg.
1298	do	Manchester Prospector	46 24	47 30	Berg (same as No. 1289).
1299	do	do	46 33	47 10	Growler.
1300	do	Ice Patrol plane	45 55	48 41	Medium berg (same as No. 1284).
1301	do	do	46 25	47 30	Small berg (same as No. 1298).
1302	do	Themisto	47 16	47 22	Small berg.
1303	do	do	47 19	47 20	Berg (same as No. 1294).
1304	do	do	47 20	47 09	Low berg (same as No. 1290).
1305	do	do	47 32	47 16	Large berg (same as No. 1291).
1306	do	do	47 26	47 09	Growler.
1307	do	do	47 27	47 15	Do.
1308	do	do	47 28	47 03	Do.
1309	do	Nova Scotia	47 15	47 25	Large berg (same as No. 1293).
1310	do	do	47 21	48 08	Large berg (same as No. 1288).
1311	do	do	47 24	48 14	Do.
1312	do	do	47 24	47 30	Growler.
			47 22	47 44	
1313	do	do	47 20	48 21	Field ice.
			76 27	70 15	
			76 37	70 20	
			77 00	71 20	
1314	do	Thule AB	77 08	71 15	Fast ice boundary.
			77 25	72 40	
			77 50	71 45	
1315	do	do	NW. of Saunders Island.		Many bergs.
1316	Apr. 23	Pan American aircraft	48 50	47 10	Berg.
1317	do	Desdemona	46 03	48 48	Large berg.
1318	do	Stockholm	45 45	48 07	Growler.
1319	do	Desdemona	46 04	47 46	Radar target possible berg (same as No. 1301).
1320	do	RCAF aircraft	45 55	49 15	Large berg (same as No. 1317).
1321	do	Ogna County	46 14	47 23	4 growlers.
1322	Apr. 24	Siredal	47 12	48 51	Radar target possible berg.
1323	do	Unknown aircraft	45 44	47 55	Medium berg (same as No. 1319).
1324	do	do	46 00	48 34	Large berg (same as No. 1320).
1325	do	Empress of Australia	47 17	47 03	Small berg and growler (same as No. 1290).
1326	do	Blairspey	46 51	47 10	Berg (same as No. 1293).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1327	Apr. 25	August Sartori	45 31	48 05	2 bergs (same as Nos. 1318 and 1323).
1328	..do..	Gardenia	46 13	46 52	Berg and growler (same as No. 1303)
1329	..do..	Blue Foam	47 50	49 40	Large berg.
1330	..do..	St. Johns radio	47 30	52 00	Berg.
1331	..do..	August Sartori	48 40	44 40	Do.
1332	..do..	Ice Patrol plane	45 44	48 12	Medium berg (same as No. 1327).
1333	..do..	..do..	46 23	46 40	Small berg.
1334	..do..	..do..	46 25	46 30	Medium berg.
1335	..do..	..do..	46 32	46 50	Medium berg (same as No. 1326).
1336	..do..	..do..	46 53	47 42	Medium berg (same as No. 1310).
1337	..do..	..do..	46 56	47 10	Large berg (same as No. 1294).
1338	..do..	..do..	46 58	46 42	Medium berg (same as No. 1325).
1339	..do..	..do..	47 00	46 33	Small berg (same as No. 1304).
1340	..do..	..do..	47 00	46 47	Small berg.
1341	..do..	..do..	47 01	46 42	Medium berg.
1342	..do..	..do..	47 02	47 04	Large berg (same as No. 1305).
1343	..do..	..do..	47 05	46 51	Small berg.
1344	..do..	..do..	47 07	47 02	Small berg (same as No. 1302).
1345	..do..	..do..	47 08	46 38	Large berg.
1346	..do..	..do..	47 11	46 45	Do.
1347	..do..	..do..	47 12	46 57	Medium berg.
1348	..do..	..do..	47 13	47 41	Large berg (same as No. 1311).
1349	..do..	..do..	47 14	47 03	Medium berg.
1350	..do..	..do..	47 16	46 59	Large berg.
1351	..do..	..do..	47 16	47 07	Do.
1352	..do..	..do..	47 17	47 39	Medium berg.
1353	..do..	..do..	47 20	46 20	Large berg.
1354	..do..	..do..	47 22	46 48	Medium berg.
1355	..do..	..do..	47 23	46 59	Small berg.
1356	..do..	..do..	47 25	47 00	Medium berg.
1357	..do..	..do..	47 26	46 20	Small berg.
1358	..do..	..do..	47 32	48 59	Do.
1359	..do..	..do..	47 36	48 13	Medium berg.
1360	..do..	..do..	47 39	53 09	Do.
1361	..do..	..do..	47 40	48 40	Do.
1362	..do..	..do..	47 40	49 17	Small berg.
1363	..do..	..do..	47 42	48 47	Medium berg.
1364	..do..	..do..	47 42	48 58	Small berg.
1365	..do..	..do..	47 42	49 11	Medium berg.
1366	..do..	..do..	47 42	49 33	Large berg.
1367	..do..	..do..	47 43	48 59	Do.
1368	..do..	..do..	47 43	49 37	Medium berg.
1369	..do..	..do..	47 44	49 25	2 medium bergs.
1370	..do..	..do..	47 45	49 10	Small berg.
1371	..do..	..do..	47 46	49 33	Do.
1372	..do..	..do..	47 47	44 45	Large berg.
1373	..do..	..do..	47 48	48 15	Small berg.
1374	..do..	..do..	47 48	49 10	Do.
1375	..do..	..do..	47 49	44 34	Medium berg.
1376	..do..	..do..	47 49	44 41	Do.
1377	..do..	..do..	47 51	44 38	Small berg.
1378	..do..	..do..	47 52	49 37	Large berg (same as No. 1329).
1379	..do..	..do..	48 02	50 11	Medium berg.
1380	..do..	..do..	{ Within 10-mile radius of		13 bergs.
			48 03	49 39	
1381	..do..	..do..	48 05	52 11	Small berg.
1382	..do..	..do..	48 08	50 11	Do.
1383	..do..	..do..	48 09	52 40	Large berg.
1384	..do..	..do..	48 12	52 32	Do.
1385	..do..	..do..	45 45	48 04	Growler.
1386	..do..	..do..	46 59	46 53	Do.
1387	..do..	..do..	47 21	45 18	Do.
1388	..do..	..do..	46 50	48 00	Radar target possible berg.
			47 40	51 34	
			{ 48 00 to 47 12		Field ice limits.
1389	..do..	..do..	47 12	47 27	
			47 42 to 47 22		
			{ thence NW.		
1390	..do..	Ardgren	47 37	47 12	Numerous growlers.
1391	..do..	Gardenia	45 56	47 52	Bergs.
1392	..do..	..do..	45 54	47 36	Growler.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
1933	Apr. 25	Hydro	52 15	55 00	Boundary of main pack.
			51 50	54 40	
			51 30	54 45	
			50 20	54 00	
			51 00	53 20	
			51 10	52 40	
			50 00	53 50	
			49 10	51 40	
			50 00	51 20	
			52 45	52 00	
1394	do	do	Fjord to BW-1		Many bergs.
1395	do	do	BW-1 harbor		Clear.
1396	do	do	BW-3 harbor		Scattered bergy bits and growlers.
1397	Apr. 26	U. S. C. G. cutter Coos Bay.	46 52	47 33	Berg (same as No. 1337).
1398	do	do	46 55	47 25	Berg (same as No. 1342).
1399	do	Cairngowan	{ Within 6-mile radius of		4 large bergs, 2 small bergs (same as Nos. 1336, 1344, 1348, 1352, 1397, 1398).
1400	do	Lovisa Gorthon	46 51	47 22	
1401	do	do	46 22	45 15	Large berg.
1402	do	Cairngowan	46 22	45 28	2 bergs.
1403	do	Atlantic	46 55	47 03	2 growlers.
1404	do	U. S. C. G. cutter Evergreen.	46 13	46 34	Berg (same as No. 1334).
1405	do	Atlantic	46 55	47 38	2 bergs (same as Nos. 1397 and 1398).
1406	do	do	46 07	46 26	Small berg (same as No. 1328).
1407	do	U. S. C. G. cutter Evergreen.	46 10	46 09	Berg (same as No. 1333).
1408	do	do	46 40	47 19	Berg (same as No. 1399).
1409	do	Ravnefjell	46 52	47 21	3 bergs (same as No. 1399).
1410	do	Lismoria	45 41	48 29	2 radar targets possible bergs.
1411	do	do	46 12	46 12	Berg (same as No. 1405).
1412	do	do	46 14	46 38	Berg (same as No. 1403).
1413	do	do	46 16	46 26	Berg and 2 growlers.
1414	do	U. S. C. G. cutter Evergreen.	46 22	46 20	Berg (same as No. 1335).
1415	do	do	46 41	47 09	Berg (same as No. 1338).
			46 41	47 00	Radar target possible berg.
			Battle Harbor to		
			51 00	55 00	
			50 00	51 00	
			49 00	49 30	
1416	do	Hydro	51 30	50 00	Pack boundary.
			55 45	50 00	
			56 50	58 00	
			60 00	57 20	
1417	do	do	East of Grey Islands.		Many bergs.
1418	do	do	BW-1 harbor and fjord.		Clear.
1419	do	do	BW-3 harbor entrance and fjord.		Scattered bergs.
1420	do	do	{ Cape Farewell to		Many bergs, 4/10 cover icefield.
1421	Apr. 27	Vaillant	60 30	48 00	
1422	do	Haulerwijk	47 35	50 40	Large berg.
1423	do	Manchuria	48 22	44 49	Berg.
1424	do	do	46 04	47 28	Berg (same as No. 1407).
1425	do	U. S. C. G. cutter Evergreen.	46 07	47 32	2 bergs (same as Nos. 1399 and 1414).
1426	do	Manchuria	46 40	46 31	Berg.
1427	do	do	46 14	46 33	Large berg (same as No. 1411).
1428	do	do	46 06	47 17	Growler.
1429	do	do	46 15	46 35	Do.
1430	do	Stoefeld	47 56	52 35	Berg.
1431	do	do	48 00	52 34	Do.
			48 05	52 23	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1432	Apr. 27	Manchuria	46 03	47 30	Growlers.
1433	do	Sheldrake	47 35	52 34	Berg.
1434	do	U. S. C. G. cutter Evergreen.	46 40	47 09	Berg and 3 growlers (same as No. 1408).
1435	do	Cyrus Field	48 40	51 30	Several small growlers and strings of slob.
1436	do	do	49 00	51 00	Southern edge loose field ice.
1437	Apr. 28	Empress of France	46 15	47 38	Large berg (same as No. 1404).
1438	do	do	46 16	47 11	Berg (same as No. 1399).
1439	do	do	46 12	48 18	7 large growlers.
1440	do	do	46 11	47 30	Many small scattered pieces.
			to		
1441	do	do	46 12	47 21	Strings brash.
1442	do	do	46 16	47 11	Do.
1443	do	Spreewald	44 20	48 18	Large berg (same as No. 1327).
1444	do	Birte Hugo Stinnes	45 28	47 35	Berg (same as No. 1391).
1445	do	do	45 34	47 33	Berg (same as No. 1339).
1446	do	do	45 37	47 15	Berg (same as No. 1340).
1447	do	do	45 39	47 43	Berg (same as No. 1350).
1448	do	do	45 41	47 32	Berg (same as No. 1341).
1449	do	do	45 45	47 38	Berg (same as No. 1343).
1450	do	do	45 47	47 39	Berg (same as No. 1349).
1451	do	do	45 56	47 19	Berg (same as No. 1346).
1452	do	do	45 56	47 23	Berg (same as No. 1347).
1453	do	do	46 05	46 31	Berg (same as No. 1426).
1454	do	do	45 42	46 56	Growler.
1455	do	do	45 49	47 21	Do.
1456	do	do	45 51	47 07	Do.
1457	do	Empress of France	46 05	47 44	Berg (same as No. 1351).
1458	do	New York City	45 56	47 18	Berg (same as No. 1424).
1459	do	do	45 58	47 17	Berg (same as No. 1424).
1460	do	do	46 00	47 05	Berg (same as No. 1353).
1461	do	do	46 06	47 11	Berg (same as No. 1423).
1462	do	do	46 08	47 24	Berg (same as No. 1413).
1463	do	do	46 10	47 04	Berg (same as No. 1355).
1464	do	do	46 11	46 56	Berg (same as No. 1356).
1465	do	Haulerwijk	46 37	47 41	Berg (same as No. 1404).
1466	do	Ice Patrol plane	44 22	48 13	Large berg and growler (same as No. 1443).
1467	do	do	45 25	45 02	Small berg (same as No. 1406).
1468	do	do	45 25	47 54	Large berg.
1469	do	do	45 28	47 42	Medium berg (same as No. 1444).
1470	do	do	45 30	47 57	Large berg.
1471	do	do	45 31	48 00	Medium berg.
1472	do	do	45 34	47 40	Medium berg (same as No. 1445).
1473	do	do	45 36	46 58	Small berg.
1474	do	do	45 37	47 50	Large berg (same as No. 1447).
1475	do	do	45 38	44 35	Small berg (same as No. 1400).
1476	do	do	45 39	44 38	Small berg (same as No. 1401).
1477	do	do	45 42	47 06	Medium berg.
1478	do	do	45 42	47 57	Large berg.
1479	do	do	45 44	47 02	Small berg.
1480	do	do	45 45	45 13	Small berg (same as No. 1410).
1481	do	do	45 45	47 22	Large berg (same as No. 1448).
1482	do	do	45 45	47 40	2 small bergs (same as Nos. 1449, 1450).
1483	do	do	45 48	46 28	Medium berg.
1484	do	do	45 48	47 00	Do.
1485	do	do	45 50	47 39	Do.
1486	do	do	45 51	47 29	Large berg.
1487	do	do	46 04	47 33	Medium berg.
1488	do	do	46 08	47 28	Large berg (same as No. 1399).
1489	do	do	46 12	47 04	Small berg (same as No. 1463).
1490	do	do	46 13	46 32	Small berg (same as No. 1425).
1491	do	do	46 18	47 01	Medium berg (same as No. 1464).
1492	do	do	46 27	47 20	Large berg.
1493	do	do	46 34	47 47	Large berg (same as No. 1465).
1494	do	do	46 48	48 40	Large berg (same as No. 1358).
1495	do	do	46 57	47 14	Small berg.
1496	do	do	47 12	48 16	Medium berg (same as No. 1363).
1497	do	do	47 15	47 58	Small berg (same as No. 1373).
1498	do	do	47 15	48 08	Medium berg (same as No. 1361).
1499	do	do	47 16	45 15	Small berg.
1500	do	do	47 18	48 11	Medium berg (same as No. 1367).
1501	do	do	47 19	48 42	Small berg (same as No. 1370).
1502	do	do	47 19	49 10	Small berg (same as No. 1362).
1503	do	do	47 20	47 52	Medium berg (same as No. 1359).
1504	do	do	47 23	48 42	Small berg (same as No. 1365).
1505	do	do	47 28	50 10	Small berg (same as No. 1421).
1506	do	do	47 29	48 29	Small berg (same as No. 1364).
1507	do	do	47 30	49 19	Small berg (same as No. 1366).
1508	do	do	47 31	49 12	2 small bergs (same as No. 1369).
1509	do	do	47 31	52 32	Small berg (same as No. 1433).
1510	do	do	47 32	49 19	Small berg (same as No. 1371).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1511	Apr. 28	Ice Patrol plane	47 32	49 48	Medium berg.
1512	do	do	47 34	49 32	Small berg.
1513	do	do	47 35	49 35	Do.
1514	do	do	47 36	49 51	2 small bergs.
1515	do	do	47 40	49 39	Small berg.
1516	do	do	47 41	52 31	Medium berg (same as No. 1430).
1517	do	do	47 44	52 38	Small berg.
1518	do	do	47 45	44 55	Do.
1519	do	do	47 45	49 50	Do.
1520	do	do	47 46	49 00	Medium berg.
1521	do	do	47 46	49 31	Large berg (same as No. 1329).
1522	do	do	47 47	49 09	Small berg.
1523	do	do	47 47	50 20	Do.
1524	do	do	47 48	49 15	Do.
1525	do	do	47 50	50 00	Do.
1526	do	do	47 52	45 30	Small berg (same as No. 1357).
1527	do	do	47 52	50 03	Medium berg.
1528	do	do	47 54	48 45	Medium berg (same as No. 1374).
1529	do	do	47 55	49 10	Small berg.
1530	do	do	47 56	48 48	Medium berg.
1531	do	do	47 56	49 18	Small berg.
1532	do	do	47 56	49 46	Do.
1533	do	do	47 57	48 52	Do.
1534	do	do	47 57	48 57	Medium berg.
1535	do	do	47 57	50 11	Small berg.
1536	do	do	47 57	50 55	Do.
1537	do	do	47 59	49 20	Do.
1538	do	do	48 00	51 50	Do.
1539	do	do	48 01	52 09	Do.
1540	do	do	48 03	49 42	Do.
1541	do	do	48 03	52 42	Do.
1542	do	do	48 05	50 03	Medium berg.
1543	do	do	48 06	48 20	Small berg.
1544	do	do	48 07	52 35	Do.
1545	do	do	48 15	51 05	Medium berg.
1546	do	do	48 15	51 15	Do.
1547	do	do	46 05	47 15	2 growlers.
1548	do	do	46 08	47 20	Growler.
1549	do	do	46 12	47 15	Do.
1550	do	do	46 15	47 12	Do.
1551	do	do	46 27	47 15	Do.
1552	do	do	46 41	47 10	3 growlers.
1553	do	do	47 00	47 15	Growler.
1554	do	do	47 10	48 08	Do.
			48 10	51 08	
			47 25	to 47 45	
1555	do	do	47 22	to 47 25	Field ice limits.
			47 45	to 47 15	
			thence NW.		
1556	do	Alf Lindeberg	45 28	45 30	Berg (same as No. 1413).
1557	do	Ragneborg	46 40	47 50	Berg (same as No. 1493).
1558	do	do	46 55	48 25	Berg (same as No. 1494).
1559	do	do	47 31	46 40	Berg.
1560	Apr. 29	U. S. C. G. Cutter Evergreen.	46 05	47 13	Berg (same as No. 1452).
1561	do	do	46 05	47 16	Berg (same as No. 1459).
1562	do	do	46 10	46 27	Radar target possible berg (same as No. 1453).
1563	do	do	46 11	47 12	Berg (same as No. 1451).
1564	do	do	46 13	47 13	Berg (same as No. 1462).
1565	do	do	46 11	47 02	2 growlers.
1566	do	do	46 18	47 09	Growler.
1567	do	Surf.	46 07	47 30	Berg (same as No. 1457).
1568	do	do	46 12	47 30	Berg.
1569	do	U. S. C. G. Cutter Evergreen.	46 15	47 31	Berg and 2 growlers (same as No. 1437).
1570	do	Luksefjell	48 00	49 08	Large berg, wide belt of field ice.
1571	do	Pan American aircraft	50 10	51 25	Several large bergs.
1572	do	Luksefjell	47 52	49 38	4 bergs.
1573	do	do	48 00	49 35	8 bergs.
1574	do	Ascania	46 32	46 11	Berg.
1575	do	do	46 41	46 10	Do.
1576	do	Georgia	46 19	46 09	Do.
1577	do	do	46 20	46 12	Berg (same as No. 1491).
1578	do	do	46 21	45 54	Berg (same as No. 1490).
1579	do	do	46 28	46 10	Berg (same as No. 1579).
1580	do	Ice Patrol plane	44 25	48 21	Medium berg (same as No. 1466).
1581	do	do	45 12	45 12	Small berg (same as No. 1467).
1582	do	do	45 25	47 57	Small berg (same as No. 1468).
1583	do	do	45 26	48 00	Small berg (same as No. 1471).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude		West longitude		Description
			°	'	°	'	
1584	Apr. 29	Ice Patrol plane	45	33	47	26	Small berg (same as No. 1472).
1585	do	do	45	33	47	43	Medium berg (same as No. 1469).
1586	do	do	45	38	45	08	Berg (same as No. 1556).
1587	do	do	45	38	47	44	Berg (same as No. 1470).
1588	do	do	45	40	47	36	Berg (same as No. 1474).
1589	do	do	45	42	45	18	Berg (same as No. 1480).
1590	do	do	45	47	47	18	Medium berg (same as No. 1482).
1591	do	do	45	47	47	26	Berg (same as No. 1482).
1592	do	do	45	51	47	00	Berg (same as No. 1481).
1593	do	do	45	51	47	18	Berg (same as No. 1486).
1594	do	do	45	53	47	13	Berg (same as No. 1485).
1595	do	do	45	57	47	08	Medium berg (same as No. 1488).
1596	do	do	46	23	47	40	Small berg (same as No. 1557).
1597	do	do	46	49	47	48	Medium berg (same as No. 1497).
1598	do	do	47	18	47	45	Small berg (same as No. 1503).
1599	do	do	47	18	47	57	Medium berg (same as No. 1500).
1600	do	do	47	19	47	50	Medium berg (same as No. 1498).
1601	do	do	47	19	48	30	Small berg (same as No. 1509).
1602	do	do	47	21	48	39	Medium berg (same as No. 1504).
1603	do	do	47	22	48	51	Small berg (same as No. 1502).
1604	do	do	47	23	48	59	Small berg (same as No. 1508).
1605	do	do	47	27	49	20	Small berg (same as No. 1507).
1606	do	do	47	32	49	12	Berg (same as No. 1508).
1607	do	do	47	32	52	32	Small berg (same as No. 1509).
1608	do	do	47	35	49	20	Medium berg (same as No. 1513).
1609	do	do	47	36	52	28	Medium berg (same as No. 1516).
1610	do	do	47	37	49	04	Small berg (same as No. 1510).
1611	do	do	47	37	49	30	Small berg (same as No. 1515).
1612	do	do	47	37	50	00	Small berg.
1613	do	do	44	23	48	00	Growler.
1614	do	do	45	41	45	11	Do.
1615	do	do	47	19	48	32	Do.
1616	do	Ascania	46	29	46	17	Berg (same as No. 1579).
1617	do	do	46	34	46	20	Berg (same as No. 1562).
1618	do	do	46	32	46	19	3 growlers.
1619	do	do	46	38	46	21	Growler.
1620	do	Kungsholm	45	32	45	11	Large berg (same as No. 1586).
1621	do	do	45	39	45	23	Small berg and growler (same as No. 1589).
1622	do	do	45	57	44	43	Small berg and growler.
1623	do	do	46	06	44	54	Large berg and growler.
1624	do	Trolleholm	46	08	45	00	Berg (same as No. 1623).
1625	do	do	45	58	45	00	Several growlers.
1626	do	Prins Alexander	46	24	47	42	Large berg (same as No. 1596).
1627	do	Georgic	46	02	47	22	Large berg (same as No. 1561).
1628	do	do	46	06	46	56	Large berg (same as No. 1461).
1629	do	do	46	07	47	00	Large berg (same as No. 1460).
1630	do	do	46	07	47	12	Small berg (same as No. 1487).
1631	do	do	46	17	46	32	Medium berg (same as No. 1617).
1632	do	do	46	18	46	14	Small berg.
1633	do	do	46	19	46	30	Large berg.
1634	do	do	46	20	46	10	Small berg.
1635	do	do	46	22	47	42	Large berg.
1636	do	do	46	24	46	36	Medium berg.
1637	do	do	46	09	46	24	2 growlers.
1638	do	Ascania	46	23	47	40	Large berg (same as No. 1635).
1639	do	do	46	36	46	54	Berg and growler (same as No. 1492).
1640	do	do	46	22	47	20	Growler.
1641	do	do	46	31	46	52	Do.
1642	do	Manchester Port	45	50	46	55	Large berg (same as No. 1484).
1643	do	do	45	53	47	08	Large berg and growlers (same as No. 1595).
1644	do	do	45	59	46	29	Small berg (same as No. 1483).
1645	do	do	46	02	46	07	Medium berg and growlers.
1646	do	do	46	20	45	55	Medium berg (same as No. 1578).
1647	do	do	46	20	46	06	Berg and growler (same as No. 1576).
			48	35	49	20	
			49	00	51	00	
			49	50	51	15	
			50	30	52	30	
1648	do	Goose Bay AB	49	35	53	10	Pack boundary.
			50	50	54	20	
			51	10	54	45	
			51	45	54	50	
			52	45	55	30	

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1649	Apr. 29	Goose Bay AB	White Bay		Clear.
1650	do	do	Notre Dame Bay		Do.
1651	do	do	St. Anthony		Do.
1652	do	do	Strait of Belle Isle		3/10 cover with scattered belts 10/10 cover.
1653	Apr. 30	Georgic	46 05	48 36	Radar target probably field ice.
1654	do	Ascania	46 23	48 00	Berg (same as No. 1635).
1655	do	Empress of Scotland	45 35	47 51	Berg (same as No. 1478).
1656	do	do	45 36	47 33	Berg (same as No. 1585).
1657	do	do	45 37	47 42	Berg (same as No. 1587).
1658	do	do	45 37	47 48	Berg.
1659	do	do	45 48	47 31	Berg (same as No. 1627).
1660	do	do	45 54	47 25	Berg (same as No. 1591).
1661	do	do	45 58	47 08	Berg (same as No. 1630).
1662	do	do	45 59	46 32	Berg (same as No. 1644).
1663	do	do	45 42	47 55	Growler.
1664	do	Manchester Port	45 27	48 00	Radar target possible berg.
1665	do	do	45 32	47 38	Do.
1666	do	do	45 35	47 45	Do.
1667	do	do	45 36	47 38	Do.
1668	do	do	45 36	47 42	Do.
1669	do	do	45 46	47 29	Do.
1670	do	do	45 51	47 20	Do.
1671	do	Montalts	47 14	44 34	Large berg (same as No. 1499).
1672	do	do	47 09	45 29	Growlers.
1673	do	Empress of France	45 51	45 13	Berg (same as No. 1621).
1674	do	do	45 54	46 12	Berg and growlers.
1675	do	U. S. N. S. Rosebud	Simiutag Bay		Growlers.
1676	do	do	Eastern Bay		5/10 covered, bergy bits, growlers and brash.
1677	do	Idefjord	47 25	44 58	Berg.
1678	do	Capitaine Pleven	45 20	47 50	Berg (same as No. 1582).
1679	do	do	45 22	48 48	Berg.
1680	do	do	45 30	47 22	Berg (same as No. 1584).
1681	do	Kristina Thorden	44 23	48 20	Large berg (same as No. 1580).
1682	do	Franciska Hendrik Fisser	46 12	46 45	2 bergs (same as Nos. 1628 and 1629).
1683	do	Beaverford	46 19	45 40	Berg (same as No. 1646).
1684	do	MSTS St. Johns	1/2 mile off St. Johns Harbor entrance.		Berg (same as No. 1517).
			48 30 | 49 20		
			49 00 | 51 00		
			50 00 | 51 20		
			50 30 | 52 30		
1685	do	Hydro	49 30 | 53 15		Inner pack boundary.
			51 10 | 54 40		
			51 45 | 54 50		
			52 00 | 55 40		
			52 45 | 55 30		
1686	do	do	BW-1 harbor		Ice free.
1687	do	do	BW-3 harbor		2/10 cover.
1688	May 1	Idefjord	45 45	45 57	Small berg (same as No. 1473).
1689	do	Consuelo	45 20	48 10	Berg.
1690	do	Irmingard	47 56	44 45	Radar target possible berg.
1691	do	Beaverford	46 08	47 13	Berg (same as No. 1564).
1692	do	do	46 10	47 00	Berg (same as No. 1438).
1693	do	do	46 19	46 31	Berg (same as No. 1682).
1694	do	do	46 19	46 33	Berg (same as No. 1682).
1695	do	Samaria	46 05	47 47	Radar target possible berg.
1696	do	Idefjord	45 24	47 34	3 bergs (same as Nos. 1655, 1658, 1678).
1697	do	Italia	46 30	45 50	Small berg, 4 growlers (same as No. 1616).
1698	do	Irmingard	47 20	47 26	Widely scattered field ice and small growlers.
1699	do	Samaria	46 08	47 11	Bergy bit.
1700	do	Stavangerfjord	46 00	48 00	Large berg (same as No. 1626).
1701	do	Samaria	46 02	46 44	Berg (same as No. 1477).
1702	do	Italia	46 06	46 15	2 bergs (same as Nos. 1479, 1662).
1703	do	Idefjord	45 18	47 30	2 bergs.
1704	do	Italia	46 01	46 55	Berg (same as No. 1643).
1705	do	Samaria	46 10	46 07	Berg (same as No. 1633).
1706	do	do	46 15	46 06	Berg (same as No. 1632).
1707	do	Cairnesk	46 56	45 14	Berg.
1708	do	do	47 03	45 26	Do.
1709	do	Hydro	BW-1 harbor		Clear.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1710	May 1	Hydro	Skovfjord		Scattered ice.
1711	do	do	BW-3 harbor entrance.		Do.
1712	do	Irmingard	46 46	47 44	Berg (same as No. 1495).
1713	May 2	Stavangerfjord	46 28	46 35	Berg (same as No. 1639).
1714	do	do	46 35	45 54	Berg (same as No. 1697).
1715	do	do	46 43	45 52	Berg (same as No. 1634).
1716	do	do	46 44	46 03	Berg (same as No. 1575).
1717	do	Laurentia	45 23	47 25	2 bergs (same as No. 1696).
1718	do	do	45 24	47 33	Berg (same as No. 1696).
1719	do	do	45 18	48 09	Radar target possible berg (same as No. 1689).
1720	do	do	45 30	47 09	Radar target possible berg (same as No. 1680).
1721	do	do	45 30	47 52	Radar target possible berg (same as No. 1657).
1722	do	do	45 40	47 09	Radar target possible berg (same as No. 1588).
1723	do	Italia	46 00	47 49	Radar target possible berg (same as No. 1567).
1724	do	Stavangerfjord	47 03	45 16	Berg (same as No. 1708).
1725	do	do	47 27	44 09	Radar target possible berg (same as No. 1671).
1726	do	Laurentia	45 42	45 30	Berg (same as No. 1688).
1727	do	Brant County	45 45	46 22	Berg (same as No. 1642).
1728	do	Bassilour	47 20	52 10	Berg (same as No. 1538).
1729	do	Cairnesk	47 04	47 45	Berg (same as No. 1601).
1730	do	Beltinge	46 25	46 08	Berg (same as No. 1577).
1731	do	do	46 29	46 25	Berg (same as No. 1636).
1732	do	do	46 48	45 29	Berg (same as No. 1619).
1733	do	Brant County	46 16	45 46	Berg (same as No. 1645).
1734	do	Groote Brer	44 30	47 58	Berg (same as No. 1681).
1735	do	Brant County	46 00	47 30	Berg (same as No. 1568).
1736	do	do	46 10	47 42	Berg (same as No. 1523).
1737	do	do	46 22	47 26	Berg (same as No. 1597).
1738	do	do	46 12	to 47 40	} Belt of field ice 1 mile wide.
1739	do	Cairnesk	46 55	49 00	
1740	do	do	} Within 10-mile radius of		} 7 bergs (same as Nos. 1520, 1522, 1529, 1530, 1533, 1534).
1741	do	do	47 00	48 25	
1742	do	Saint Andre	47 18	50 52	Berg (same as No. 1511).
1743	do	do	47 24	51 10	Berg (same as No. 1523).
1744	do	Vardulia	45 49	48 06	Berg (same as No. 1536).
1745	do	Beltinge	46 25	47 24	} Field ice.
1746	do	Cairnesk	46 58	49 42	
1747	do	do	47 09	49 56	Berg (same as No. 1605).
1748	do	do	47 09	49 58	Berg (same as No. 1527).
1749	do	do	47 15	49 30	Berg (same as No. 1535).
1750	do	do	47 15	49 49	Berg (same as No. 1514).
1751	do	do	47 16	49 37	Berg (same as No. 1525).
1752	do	do	47 17	50 00	Berg (same as No. 1514).
1753	do	do	47 20	49 38	Berg (same as No. 1532).
1754	do	do	47 25	50 01	Berg (same as No. 1519).
1755	do	U. S. S. Eaton	46 02	46 05	Berg (same as No. 1573).
1756	do	do	46 04	46 05	Berg (same as No. 1702).
1757	do	do	46 10	46 24	Do.
1758	do	do	46 18	47 05	Berg (same as No. 1563).
			60 30	48 25	Berg.
			60 40	to 47 20	} Storis boundary.
			59 30	to 44 00	
			60 00	to 42 25	
1759	do	Hydro	61 15	to 42 00	
			63 50	to 39 40	
			64 00	to 40 30	
			65 30	to 36 10	
1760	May 3	Vardulia	45 42	46 17	Berg (same as No. 1727).
1761	do	do	45 50	46 01	Berg (same as No. 1592).
1762	do	do	46 01	46 03	Berg (same as No. 1755).
1763	do	do	45 55	46 17	Growler.
1764	do	Saint Andre	47 44	49 51	Radar target possible berg.
1765	do	do	47 26	50 11	2 growlers.
1766	do	Hispania	47 00	50 10	Berg (same as No. 1747).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1767	May 3.	Saint Andre.	47 12	50 21	Large berg (same as No. 1752).
1768	do.	do.	47 16	50 19	Large berg (same as No. 1754).
1769	do.	Laholm.	48 09	51 40	Large berg.
1770	do.	do.	47 58	51 45	Growler.
1771	do.	Fernandes Lavrador.	46 58	50 13	2 bergs (same as Nos. 1748, 1766).
1772	do.	Arthur Cross.	47 03	52 50	Several small bergs (same as Nos. 1609, 1728).
1773	do.	do.	47 24	52 30	Berg (same as No. 1607).
1774	do.	Narsarssuak A.B.	Narsak to seaward.		48 bergs, 30 percent drift ice.
1775	do.	do.	Fjord.		2 growlers, some brash ice.
1776	do.	do.	BW-3 harbor.		14 growlers, 5 bergy bits.
1777	do.	do.	BW-1 harbor.		Clear.
1778	do.	Santa Eugenia.	47 06	51 38	Berg.
			54 40	54 50	
1779	do.	USN aircraft.	53 25	53 40	Pack boundary.
			53 10	54 00	
			52 50	53 00	
			46 05	47 53	
1780	do.	Konsul Sartori.	46 05	47 53	Berg (same as No. 1736).
1781	do.	do.	46 15	45 43	Patch of field ice.
1782	do.	Eastide.	46 18	52 48	Berg (same as No. 1733).
1783	do.	Tidaholm.	45 49	47 46	Growler.
1784	do.	Cortona.	46 04	48 12	Do.
1785	May 4.	Eastide.	46 48	50 15	Field ice.
1786	do.	Cairndhu.	44 58	48 09	Radar target possible berg (same as No. 1771).
1787	do.	Beaverbrae.	45 02	47 43	Radar target possible berg.
1788	do.	do.	45 04	47 32	Radar target possible berg (same as No. 1703).
1789	do.	do.	45 07	47 38	Do.
1790	do.	do.	45 14	47 27	Radar target possible berg (same as No. 1717).
1791	do.	do.	45 14	48 00	Do.
1792	do.	do.	46 49	49 42	Radar target possible berg (same as No. 1719).
1793	do.	Cairndhu.	45 05	47 31	2 bergs (same as Nos. 1746, 1750).
1794	do.	Beaverbrae.	45 22	47 04	Berg (same as No. 1789).
1795	do.	do.	45 26	46 34	Radar target possible berg (same as No. 1656).
1796	do.	do.	46 59	44 45	Growler.
1797	do.	Kurt Arlt.	46 45	48 52	Growler and scattered floes.
1798	do.	Cairndhu.	46 45	49 10	2 bergs (same as Nos. 1602, 1615).
1799	do.	do.	46 50	49 09	Berg (same as No. 1604).
1800	do.	do.	46 54	48 54	Berg (same as No. 1606).
1801	do.	do.	46 48	48 20	Field ice.
1802	do.	Cortona.	45 45	47 07	
1803	do.	do.	45 48	47 01	
1804	do.	Collafoss.	47 47	51 55	
1805	do.	do.	47 50	51 39	Do.
1806	do.	do.	48 02	51 40	Do.
1807	do.	do.	48 04	51 50	Do.
1808	do.	Frans Gorthon.	47 44	48 15	Berg (same as No. 1570).
1809	do.	River Afton.	46 25	46 42	Small berg (same as No. 1758).
1810	do.	Beaverbrae.	45 27	46 34	Berg (same as No. 1720).
1811	do.	do.	45 32	46 02	Radar target possible berg.
1812	do.	Ice Patrol plane.	46 58	52 47	Berg (same as No. 1772).
1813	do.	do.	46 59	52 22	Berg (same as No. 1778).
1814	do.	do.	47 02	52 21	Berg (same as No. 1773).
1815	do.	do.	47 02	52 42	Berg (same as No. 1772).
1816	do.	do.	47 25	52 37	Berg (same as No. 1743).
1817	do.	do.	Within 20 miles of east coast of Newfoundland, between Cape Race and Cape Spear.		Many growlers.
1818	do.	Cairndhu.	47 34	46 00	Berg.
1819	do.	Ramore Head.	45 18	48 21	Radar target possible berg.
1820	do.	do.	45 25	47 22	Berg (same as No. 1659).
1821	do.	do.	45 32	47 35	Berg (same as No. 1721).
1822	do.	Begonia.	46 08	53 07	Berg.
			46 05	48 00	
1823	do.	River Afton.	46 16	48 15	Scattered field ice.
1824	do.	Ramore Head.	45 20	46 45	
1825	do.	do.	45 27	46 45	
1826	do.	River Afton.	46 12	48 30	
1827	do.	do.	46 19	48 32	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
1828	May 5	Sally Stove	45 55	50 25	Berg (same as No. 1537).
1829	do	do	46 03	50 15	Berg (same as No. 1611).
1830	do	do	46 03	50 22	Berg (same as No. 1521).
1831	do	do	46 03	50 29	Berg (same as No. 1524).
1832	do	do	46 05	50 05	Berg (same as No. 1608).
1833	do	Runswick	45 27	47 21	Berg (same as No. 1820).
1834	do	River Afton	46 45	51 37	Berg.
1835	do	Oslofjord	45 09	47 18	Berg and growlers (same as No. 1790).
1836	do	do	45 09	47 40	Berg (same as No. 1792).
1837	do	do	45 13	48 46	Berg (same as No. 1700).
1838	do	do	45 09	48 20	Field ice.
1839	do	Runswick	Within 5-mile radius of		Field ice.
			46 43	48 18	
1840	do	U. S. C. G. Cutter McCulloch.	46 35	52 22	Large berg (same as No. 1827).
1841	do	do	46 38	52 11	Large berg (same as No. 1814).
1842	do	River Afton	47 18	52 05	Berg (same as No. 1816).
1843	do	do	46 55	51 35	Growler.
1844	do	do	47 09	51 55	Do.
1845	do	Runswick	45 48	46 34	Berg.
1846	do	Begonia	44 57	48 10	Growler.
1847	do	do	45 00	48 12	Do.
1848	do	do	45 02	48 14	Do.
1849	do	U. S. C. G. Cutter McCulloch.	46 33	50 53	Berg (same as No. 1771).
1850	do	do	46 40	50 52	Berg (same as No. 1742).
1851	do	do	46 47	50 55	Berg (same as No. 1767).
1852	do	Begonia	44 52	47 36	Berg (same as No. 1788).
1853	do	do	44 54	47 27	Berg (same as No. 1794).
1854	do	Vandalia	45 19	48 38	String soft field ice 10 miles long.
1855	do	U. S. C. G. Cutter McCulloch.	46 35	50 23	Berg (same as No. 1786).
1856	do	do	46 36	50 02	Berg (same as No. 1793).
1857	do	do	46 39	50 22	Berg (same as No. 1768).
1858	do	do	46 42	49 57	Berg (same as No. 1749).
1859	do	do	46 42	50 02	Berg (same as No. 1793).
1860	do	do	46 45	49 59	Berg (same as No. 1753).
1861	do	do	46 45	50 22	Berg (same as No. 1751).
1862	do	do	46 41	50 17	Growler.
1863	May 6	do	46 44	49 53	Berg (same as No. 1741).
1864	do	do	46 46	49 49	Berg (same as No. 1572).
1865	do	Empire State Mariner	47 00	52 49	Berg (same as No. 1815).
1866	do	do	47 13	52 40	Berg.
1867	do	do	47 25	52 38	Do.
1868	do	Empress of Australia	46 28	48 53	Berg (same as No. 1798).
1869	do	Nova Scotia	46 56	52 53	Berg (same as No. 1812).
1870	do	do	47 00	52 50	Berg (same as No. 1865).
1871	do	do	47 10	52 42	Growler.
1872	do	Elysia	44 50	45 56	Large berg (same as No. 1590).
1873	do	Seythia	45 26	48 46	Radar target possible berg.
1874	do	Vandalia	45 07	47 25	Growler.
1875	do	Begonia	44 48	46 14	Radar target possible berg.
1876	do	do	44 53	46 39	Do.
1877	do	Empress of Australia	46 12	49 57	Berg.
1878	do	Mont Gaspe	45 54	48 08	3 small bergs (same as Nos. 1712, 1737, 1780).
1879	do	Elysia	44 21	48 14	Small berg and growler (same as No. 1734).
1880	do	Dundee	Within 3-mile radius of		Brash and small growlers.
			45 49	48 10	
1881	do	Fort Hamilton	46 49	52 49	Large berg (same as No. 1870).
1882	do	do	46 56	52 53	Berg (same as No. 1869).
1883	do	do	47 25	52 38	Berg (same as No. 1867).
1884	do	American Robin	44 48	46 27	Berg (same as No. 1593).
1885	do	U. S. C. G. Cutter Half Moon.	46 15	52 54	Berg (same as No. 1840).
1886	do	Galerna	46 30	51 20	Berg (same as No. 1573).
1887	do	Hydro	Vicinity of		Patches and belts of field ice.
			50 39	52 26	
1888	May 7	U. S. C. G. Cutter Half Moon.	46 12	53 05	Growler.
1889	do	Empress of France	45 44	50 20	Radar target possible berg.
1890	do	do	45 46	50 20	Do.
1891	do	do	46 05	53 04	Berg (same as No. 1822).
1892	do	do	46 07	52 49	Berg (same as No. 1885).
			45 40	50 20	
1893	do	Vikings	to		Many bergs and growlers (same as Nos. 1828, 1829, 1830, 1831, 1832).
			46 00	51 10	
1894	do	Newfoundland	46 57	49 20	Berg (same as No. 1639).
1895	do	do	47 00	49 43	Berg (same as No. 1573).
1896	do	do	47 08	48 44	Berg (same as No. 1632).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1897	May 7	Newfoundland	47 15	48 51	Berg (same as No. 1600).
1898	do	do	46 59	48 37	Radar target possible berg.
1899	do	do	47 07	48 35	2 radar targets possible bergs.
1900	do	do	47 09	50 28	Radar target possible berg.
1901	do	Pedro de Barcelos	46 36	51 30	Berg (same as No. 1834).
1902	do	do	46 39	51 30	Berg (same as No. 1851).
1903	do	do	46 46	51 17	Berg (same as No. 1850).
1904	do	do	46 46	51 24	Berg (same as No. 1849).
1905	do	do	46 47	51 19	Berg.
1906	do	Cape Race Radio	46 30	53 05	Berg (same as No. 1841).
1907	do	Empress of France	46 08	48 44	Radar target possible berg.
1908	do	do	46 13	48 31	Do.
1909	do	do	46 17	48 25	Small berg (same as No. 1739).
1910	do	do	46 18	48 29	Small berg (same as No. 1740).
1911	do	Galerna	46 26	52 00	2 bergs and growlers.
1912	do	Blairdevon	44 51	46 41	Large berg and growler (same as No. 1853).
1913	do	do	44 53	47 53	Large berg (same as No. 1622).
1914	do	do	44 55	47 58	Berg (same as No. 1574).
1915	do	do	44 56	47 28	Large berg (same as No. 1852).
1916	do	do	44 56	47 39	Large berg and growlers (same as No. 1787).
1917	do	Seven Seas	45 15	47 00	Berg (same as No. 1791).
1918	do	Nova Scotia	47 27	52 23	Radar target possible berg.
1919	do	do	47 28	52 16	Do.
1920	do	Empress of France	46 51	46 47	Berg (same as No. 1626).
1921	do	Nova Scotia	47 12	50 39	Radar target possible berg (same as No. 1829).
1922	do	River Afton	47 43	52 38	Berg.
1923	do	do	47 50	52 55	Do.
1924	do	do	47 50	52 50	2 growlers.
			56 20	56 35	
1925	do	Hydro	55 50	57 25	Partial pack boundary.
			55 00	56 45	
			54 00	56 20	
1926	May 8	Blairdevon	44 50	49 08	Radar target possible berg.
1927	do	Nova Scotia	46 41	48 42	Do.
1928	do	do	46 45	49 18	Berg (same as No. 1799).
1929	do	do	46 47	48 35	Radar target possible berg.
1930	do	do	47 02	49 50	Berg.
1931	do	River Afton	46 08	51 47	Radar target possible berg.
1932	do	do	46 23	52 04	Do.
1933	do	do	46 24	52 01	Do.
1934	do	do	46 44	52 05	Do.
1935	do	do	46 54	52 11	Do.
1936	do	do	47 04	52 13	Do.
1937	do	do	46 12	51 53	Growler.
1938	do	do	46 44	52 07	Do.
1939	do	Neptunia	44 03	48 45	Numerous growlers.
1940	do	do	44 06	48 52	Growler.
1941	do	Welheim	47 15	49 38	Large berg.
1942	do	do	47 16	49 46	Do.
1943	do	do	47 25	49 47	Do.
1944	do	Puerto de Fontefria	46 16	50 15	1 large and 2 small bergs (same as Nos. 1856, 1858, 1859).
1945	do	Corinaldo	44 27	48 21	Berg (same as No. 1627).
1946	do	do	44 40	48 15	Berg (same as No. 1574).
1947	do	do	44 47	48 23	Berg (same as No. 1837).
1948	do	do	44 48	46 50	Berg (same as No. 1835).
1949	do	do	44 39	48 33	Growler.
1950	do	Camberra	44 47	46 44	Berg (same as No. 1948).
1951	do	U. S. N. S. Johnson	44 40	49 13	Thin belt field ice.
1952	do	Welheim	46 56	51 06	2 bergs.
1953	do	Mistral	46 10	52 08	Berg (same as No. 1933).
1954	do	Maria Weitert	47 23	48 49	Berg (same as No. 1808).
1955	May 9	do	47 28	49 26	Berg.
1956	do	U. S. N. S. Johnson	45 10	47 23	Berg (same as No. 1836).
1957	do	do	45 13	47 36	Berg (same as No. 1660).
1958	do	Welheim	46 41	51 25	Berg (same as No. 1904).
1959	do	do	46 45	51 22	Berg (same as No. 1905).
1960	do	U. S. N. S. Johnson	47 12	46 18	Berg (same as No. 1559).
1961	do	Newfoundland	47 15	52 38	Berg (same as No. 1883).
1962	do	Triland	47 00	50 58	Berg (same as No. 1885).
1963	do	do	47 03	51 00	Berg.
1964	do	do	47 10	51 00	Do.
1965	do	River Afton	44 08	48 59	Berg (same as No. 1744).
1966	do	do	43 59	48 51	Growler.
1967	do	Foldenford	44 40	46 35	Large berg and several growlers (same as No. 1950).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1968	May 9	Empire State Mariner	46 55	52 52	Small berg (same as No. 1882).
1969	do	do	47 00	52 49	Large berg (same as No. 1866).
1970	do	do	47 14	52 39	Berg (same as No. 1961).
1971	do	do	47 22	52 29	Berg (same as No. 1922).
1972	do	do	47 25	52 39	Berg.
1973	do	Manchester Progress	45 49	54 10	Small berg (same as No. 1891).
1974	do	Newfoundland	46 29	53 26	Small berg (same as No. 1906).
1975	do	do	46 20	53 40	Growler.
1976	do	U. S. C. G. Cutter Cook Inlet.	46 46	48 57	Large berg (same as No. 1800).
1977	do	do	46 55	48 53	Large berg (same as No. 1894).
1978	do	do	47 01	48 27	Radar target possible berg.
1979	do	do	47 05	48 45	Large berg.
1980	do	do	47 11	48 55	Large berg (same as No. 1943).
1981	do	do	47 12	48 42	Large berg (same as No. 1896).
1982	do	do	47 13	48 43	Large berg (same as No. 1897).
1983	do	do	47 18	49 05	Large berg (same as No. 1954).
1984	do	do	47 05	48 45	Growler.
1985	do	do	47 12	48 44	Do.
1986	do	do	47 12	48 43	Bergy bit.
1987	do	Maria Weiert	47 31	52 22	3 large bergs.
1988	do	Nordland	44 14	48 57	Large berg (same as No. 1965).
1989	do	Foldenford	44 48	47 59	Berg (same as No. 1914).
1990	do	Tasmania Star	44 12	49 06	Large berg (same as No. 1988).
1991	do	do	43 57	49 11	Growler.
1992	do	Avonwood	46 24	53 26	Berg (same as No. 1881).
1993	do	Foldenford	45 08	49 11	Berg (same as No. 1826).
1994	do	do	45 12	49 21	Berg (same as No. 1827).
1995	do	U. S. C. G. Cutter Cook Inlet.	46 09	49 55	Berg (same as No. 1877).
1996	do	do	46 18	49 40	Berg (same as No. 1860).
1997	do	do	46 22	49 49	Berg (same as No. 1861).
1998	do	do	46 23	50 00	Berg (same as No. 1864).
1999	do	do	46 26	49 20	Berg (same as No. 1798).
2000	do	do	46 30	49 51	Berg (same as No. 1857).
2001	do	do	46 33	49 49	Berg (same as No. 1863).
2002	do	do	{ Within 10-mile radius of }		{ Numerous growlers and bergy bits.
2003	do	Foldenford	46 21	49 45	
			45 14	49 40	
2004	do	Asia	44 20	49 02	Berg (same as No. 1990).
2005	do	do	44 27	48 48	Growler.
2006	do	Avonwood	46 42	52 42	Berg (same as No. 1842).
2007	do	U. S. C. G. Cutter Cook Inlet.	45 42	51 31	Berg (same as No. 1893).
2008	do	do	45 43	51 27	Do.
2009	do	do	45 46	51 05	Do.
2010	do	do	45 49	51 06	Do.
2011	do	do	46 00	51 07	Do.
2012	do	do	46 01	50 25	Berg (same as No. 1928).
2013	do	do	46 01	50 33	Berg (same as No. 1893).
2014	do	do	46 03	51 04	Do.
2015	do	do	46 11	50 17	Berg (same as No. 1944).
2016	do	do	46 12	50 34	Do.
2017	do	do	45 56	51 09	3 growlers.
2018	do	do	46 02	50 31	Growlers.
2019	do	do	46 07	50 15	Bergy bits.
2020	do	do	46 04	50 49	Bergy bit.
2021	do	Nordland	44 33	46 33	Berg and many growlers (same as No. 1967).
2022	do	Avonwood	47 01	52 55	2 bergs (same as Nos. 1968, 1969).
2023	do	do	47 07	52 33	Berg (same as No. 1970).
2024	do	do	47 18	52 36	Berg (same as No. 1971).
2025	do	do	47 24	52 09	Berg (same as No. 1987).
2026	do	do	47 26	52 37	Several growlers.
2027	do	Ogna County	45 46	54 15	Berg (same as No. 1973).
2028	May 10	Foldenford	45 30	51 50	Berg (same as No. 1953).
2029	do	U. S. N. S. Valdez	47 00	52 48	Berg (same as No. 2022).
2030	do	do	47 05	52 47	Berg.
2031	do	Air France plane	49 30	52 30	Large berg.
2032	do	Arosa Kolm	44 28	48 35	Growler.
2033	do	Michigan	46 24	52 15	Berg (same as No. 1901).
2034	do	do	46 29	52 23	Berg (same as No. 1968).
2035	do	U. S. N. S. Valdez	46 56	52 53	Berg (same as No. 2029).
2036	do	do	47 02	52 37	Berg (same as No. 2023).
2037	do	do	47 14	52 49	Berg (same as No. 2024).
2038	do	do	47 16	52 41	Berg (same as No. 1972).
2039	do	do	47 22	52 40	Berg (same as No. 1987).
2040	do	do	47 06	52 40	Growler.
2041	do	Ogna County	45 15	51 24	Berg (same as No. 2009).
2042	do	do	45 15	51 25	Berg (same as No. 2008).
2043	do	do	45 15	51 26	Berg (same as No. 2007).
2044	do	do	45 29	50 54	Berg (same as No. 2010).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
2045	May 10	Michigan	45 50	51 12	Berg (same as No. 2011).
2046	do	do	46 08	51 56	Berg (same as No. 1886).
2047	do	do	46 12	51 48	Berg (same as No. 1903).
2048	do	do	46 16	51 44	Berg (same as No. 1902).
2049	do	Hoyanger	46 22	53 49	Berg (same as No. 1992).
2050	do	do	46 25	53 40	Berg (same as No. 1974).
2051	do	Ogna County	45 12	49 42	Berg (same as No. 2003).
2052	do	Zapora	45 50	53 15	Berg (same as No. 1892).
2053	do	do	46 05	53 30	Berg.
2054	do	Ogna County	45 11	49 07	Berg (same as No. 1993).
2055	do	Alexandra Sartori	47 07	48 54	Berg (same as No. 1980).
2056	do	do	47 11	48 41	2 bergs (same as Nos. 1981, 1982).
2057	do	Arosa Kolm	45 06	51 08	3 bergs (same as Nos. 2041, 2042, 2043).
2058	do	Ice Patrol plane	44 10	48 40	Medium berg (same as No. 2004).
2059	do	do	44 17	49 10	Large berg (same as No. 1723).
2060	do	do	44 26	47 29	Small berg (same as No. 1879).
2061	do	do	44 27	48 00	Large berg (same as No. 1946).
2062	do	do	44 48	48 35	Large berg (same as No. 1947).
2063	do	do	44 51	49 31	Large berg (same as No. 2054).
2064	do	do	44 52	47 26	Small berg (same as No. 1913).
2065	do	do	44 58	48 50	Small berg (same as No. 1878).
2066	do	do	45 02	49 42	Large berg (same as No. 1909).
2067	do	do	45 10	49 40	Small berg (same as No. 1910).
2068	do	do	45 12	51 00	Large berg (same as No. 2057).
2069	do	do	45 15	47 37	Berg and growler (same as No. 1957).
2070	do	do	45 20	51 30	Berg and growler.
2071	do	do	45 25	50 56	Berg (same as No. 2044).
2072	do	do	45 25	51 01	Berg (same as No. 2057).
2073	do	do	45 26	51 42	Berg and growler.
2074	do	do	45 28	51 52	Large berg.
2075	do	do	45 30	51 20	Medium berg.
2076	do	do	45 54	50 50	Berg (same as No. 2018).
2077	do	do	45 56	52 09	Berg (same as No. 2046).
2078	do	do	45 57	51 18	Berg (same as No. 2014).
2079	do	do	45 59	52 34	Berg.
2080	do	do	46 00	50 49	Berg (same as No. 2016).
2081	do	do	46 02	50 36	Berg (same as No. 2012).
2082	do	do	46 03	50 28	Berg (same as No. 2015).
2083	do	do	46 04	52 50	Berg.
2084	do	do	46 12	51 48	Berg (same as No. 2047).
2085	do	do	46 19	52 11	Berg (same as No. 2033).
2086	do	do	46 19	52 20	Berg (same as No. 2034).
2087	do	do	46 21	53 39	Berg (same as No. 2050).
2088	do	do	46 25	49 50	Small berg (same as No. 2001).
2089	do	do	46 25	52 52	Berg (same as No. 2006).
2090	do	do	46 28	49 20	Medium berg (same as No. 1999).
2091	do	do	46 29	53 38	Berg (same as No. 2049).
2092	do	do	46 30	51 14	Small berg (same as No. 1958).
2093	do	do	46 31	49 45	Small berg (same as No. 2000).
2094	do	do	46 35	50 26	Medium berg (same as No. 1930).
2095	do	do	46 35	50 46	Medium berg.
2096	do	do	46 39	49 05	Small berg (same as No. 1976).
2097	do	do	46 41	50 52	Small berg (same as No. 1952).
2098	do	do	46 49	49 58	Medium berg (same as No. 1895).
2099	do	do	46 50	48 28	Small berg (same as No. 1740).
2100	do	do	46 51	48 29	Do.
2101	do	do	46 51	48 31	Do.
2102	do	do	46 55	50 42	Medium berg (same as No. 1962).
2103	do	do	46 56	47 10	Small berg.
2104	do	do	46 56	48 49	Medium berg (same as No. 1977).
2105	do	do	46 59	51 11	Small berg (same as No. 1941).
2106	do	do	47 00	49 08	Small berg (same as No. 1942).
2107	do	do	47 03	51 16	Small berg (same as No. 1964).
2108	do	do	47 05	48 39	Small berg (same as No. 1979).
2109	do	do	47 06	48 37	Small berg (same as No. 1983).
2110	do	do	47 07	49 41	Medium berg (same as No. 1955).
2111	do	do	47 09	48 50	Medium berg.
2112	do	do	47 15	49 04	Small berg.
2113	do	do	47 20	46 36	Small berg (same as No. 1960).
2114	do	do	47 20	49 44	2 small bergs.
2115	do	do	47 30	49 36	Medium berg.
2116	do	do	47 34	52 14	Medium berg (same as No. 1901).
2117	do	do	47 50	49 42	Medium berg.
2118	do	do	48 04	53 08	Small berg.
2119	do	do	48 21	51 18	Do.
2120	do	do	44 46	49 01	Growler.
2121	do	do	44 59	49 10	Do.
2122	do	do	45 02	48 44	Do.
2123	do	do	45 05	48 38	Do.
2124	do	do	45 10	49 20	Do.
2125	do	do	45 15	47 33	Do.
2126	do	do	45 31	51 50	Do.
2127	do	do	45 47	51 28	Do.
2128	do	do	45 50	50 42	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
2129	May 10	Ice Patrol plane	45 52	50 46	Growler
2130	do	do	45 57	51 05	Do.
2131	do	do	46 00	52 03	Do.
2132	do	do	46 01	51 52	Do.
2133	do	do	46 54	50 38	Do.
2134	do	do	46 59	51 09	Do.
2135	do	do	46 05	49 15	Radar target possible berg.
2136	do	do	46 11	50 04	Do.
2137	do	do	46 26	50 20	Do.
2138	do	do	48 18	49 30	Do.
2139	do	do	48 38	50 15	Do.
2140	do	Alexandra Sartori	47 14	48 55	Berg (same as No. 2112).
2141	do	Unknown aircraft	49 25	52 55	Berg.
2142	do	do	50 05	52 55	Do.
2143	do	Prins Willem Van Oranje	46 14	47 06	2 bergs (same as Nos. 1735, 1821).
2144	do	Gaspe	47 46	53 09	Large berg (same as No. 1923).
2145	do	do	47 47	52 55	Growler.
2146	do	Divina	44 37	46 13	Berg (same as No. 1912).
2147	do	Ogna County	45 12	47 52	Large berg and growlers (same as No. 1989).
2148	do	U. S. C. G. Cutter Castle Rock.	47 20	49 41	2 medium bergs (same as No. 2114).
2149	do	do	47 32	49 41	Medium berg (same as No. 2115).
2150	May 11	Prins Willem Van Oranje	45 58	49 32	Berg (same as No. 1995).
2151	do	do	46 00	48 57	2 large bergs (same as Nos. 1996, 1997).
2152	do	do	46 02	49 24	Berg (same as No. 1998).
2153	do	do	46 04	49 18	Berg (same as No. 1868).
2154	do	do	46 04	50 19	Small berg and growlers (same as No. 2082).
2155	do	do	46 05	51 34	Large berg (same as No. 2084).
2156	do	do	46 06	50 38	Berg (same as No. 2076).
2157	do	do	46 08	51 03	Berg (same as No. 2078).
2158	do	do	46 09	52 40	Large berg (same as No. 2089).
2159	do	do	46 10	50 32	Berg (same as No. 2080).
2160	do	do	46 11	50 51	Berg (same as No. 2092).
2161	do	do	46 12	53 00	Large berg (same as No. 2030).
2162	do	do	46 14	50 24	Berg (same as No. 2081).
2163	do	do	46 14	52 52	Medium berg (same as No. 2083).
2164	do	do	46 15	52 31	Large berg (same as No. 2085).
2165	do	do	46 16	52 22	Berg (same as No. 2086).
2166	do	do	46 23	53 05	Large berg.
2167	do	do	45 55	50 14	Growler.
2168	do	do	46 00	50 36	Do.
2169	do	do	46 04	51 24	Do.
2170	do	do	46 05	51 38	Do.
2171	do	do	46 09	51 37	Do.
2172	do	U. S. C. G. Cutter Castle Rock.	46 00	53 27	Berg (same as No. 2053).
2173	do	do	46 14	52 50	Berg and 2 growlers (same as No. 2163).
2174	do	do	46 17	52 55	Berg (same as No. 2161).
2175	do	do	46 28	52 10	Berg.
2176	do	do	46 57	50 57	2 medium bergs (same as Nos. 2105, 2107).
2177	do	do	46 20	52 31	Growler.
2178	do	do	46 56	51 00	Do.
2179	do	Fort Hamilton	46 52	52 45	Berg (same as No. 2036).
2180	do	do	47 00	52 49	Berg (same as No. 2029).
2181	do	do	47 04	52 48	Berg (same as No. 2038).
2182	do	do	47 10	52 45	Berg (same as No. 2040).
2183	do	Geheimrat Sartori	46 30	53 38	Berg (same as No. 2091).
2184	do	do	46 41	52 50	Berg (same as No. 2035).
2185	do	do	46 40	52 40	Growler.
2186	do	Stad Alkmaar	47 31	49 34	Berg (same as No. 2149).
2187	do	do	47 50	49 37	Berg and growler (same as No. 2117).
2188	do	Euskal-Erria	45 44	51 46	Berg (same as No. 2077).
2189	do	do	45 56	51 25	Berg (same as No. 2045).
2190	do	Mareiro	45 48	54 28	Berg (same as No. 2027).
2191	do	do	45 58	53 35	Large berg (same as No. 2172).
2192	do	Hoyanger	44 17	48 57	Large berg (same as No. 2059).
2193	do	do	44 17	49 10	Large berg.
2194	do	Mareiro	46 02	52 45	Berg and 3 growlers (same as No. 2079).
2195	do	Bristol City	46 04	53 34	Growler.
2196	do	do	46 05	53 36	Do.
2197	do	do	46 05	53 37	Do.
2198	do	do	46 06	53 38	Do.
2199	do	Lismoria	45 06	50 35	Berg (same as No. 2068).
2200	do	do	45 36	49 40	Berg (same as No. 1878).
2201	do	do	45 37	49 06	Berg (same as No. 2091).
2202	do	do	45 46	49 08	Berg and growlers (same as No. 2151).
2203	do	do	45 47	49 03	Berg (same as No. 1878).
2204	do	do	45 47	49 07	Berg and growler.
2205	do	do	45 41	49 07	Growler.
2206	do	Themisto	44 11	48 51	Berg (same as No. 2192).
2207	do	do	44 21	48 37	Berg (same as No. 2058).
2208	do	do	44 39	48 01	Berg (same as No. 2061).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2209	May 11.	Themisto.....	44 29	48 29	Growler.
2210	do.....	Gaspe.....	48 08	52 51	Berg.
2211	do.....	do.....	48 17	52 32	Do.
2212	do.....	do.....	48 19	52 51	Do.
2213	do.....	Geheimrat Sartori.....	47 28	49 30	Berg (same as No. 2186).
			49 20	53 45	
			51 00	51 45	
			to	to	
			5 miles east of Belle		
			Isle to		
2214	do.....	Hydro.....	53 45	55 30	Pack boundary.
			to	to	
			20 miles east of		
			Georges Island to		
			55 00	56 45	
			to	to	
			56 00	59 15	
			to	to	
			58 20	60 00	
			to	to	
			60 00	63 15	
2215	do.....	do.....	Simiutak ap-		6/10 to 8/10 brash.
			proaches.		
2216	do.....	do.....	BW-1 and upper		2/10 brash.
			fjord.		
2217	do.....	do.....	BW-3 harbor		3/10 brash.
2218	May 12.	Bristol City.....	45 59	52 24	Small berg (same as No. 2158).
2219	do.....	do.....	46 01	52 17	Berg (same as No. 2165).
2220	do.....	do.....	46 03	51 38	Berg and growler (same as No. 2170).
2221	do.....	Seaboard Enterprise.....	45 50	51 54	Small berg (same as No. 2188).
2222	do.....	do.....	46 04	53 44	Berg (same as No. 2052).
2223	do.....	do.....	45 50	51 53	Growler.
2224	do.....	Helga Smith.....	46 19	49 50	2 bergs (same as Nos. 2088, 2093).
2225	do.....	Seaboard Enterprise.....	45 44	51 35	Berg (same as No. 2221).
2226	do.....	do.....	45 45	51 29	Berg (same as No. 2189).
2227	do.....	do.....	45 45	51 48	3 growlers.
2228	do.....	Canadian Department of Transport.	Point Amour		Close packed ice.
2229	do.....	do.....	Strait of Belle Isle.		Heavy loose ice.
2230	do.....	Bristol City.....	46 00	50 54	Berg (same as No. 2160).
2231	do.....	do.....	46 01	51 03	Berg (same as No. 2157).
2232	do.....	do.....	46 04	51 21	Small berg (same as No. 2220).
2233	do.....	do.....	46 01	51 00	Growler.
2234	do.....	Wabana.....	47 03	52 36	Large berg (same as No. 2116).
2235	do.....	USN aircraft.....	46 05	54 45	Berg.
2236	do.....	Franconia.....	44 37	48 45	Berg (same as No. 2065).
2237	do.....	do.....	45 05	48 02	Berg (same as No. 2062).
2238	do.....	Seaboard Enterprise.....	45 47	50 56	Berg (same as No. 2230).
2239	do.....	do.....	45 45	51 48	3 growlers.
2240	do.....	Avonwood.....	47 01	52 49	Berg (same as No. 2180).
			60 45	47 00	
			to	to	
			60 00	48 00	
			to	to	
			61 00	49 00	
			to	to	
2241	do.....	Hydro.....	61 00	49 45	Pack boundary.
			to	to	
			60 00	49 15	
			to	to	
			59 30	48 00	
			to	to	
			59 15	46 30	
			59 30	43 48	
			to	to	
			59 35	44 06	
			to	to	
			59 12	44 35	
			to	to	
			59 58	45 32	
			to	to	
			59 15	45 50	
			to	to	
2242	do.....	Narsarssuak AB.....	59 10	46 10	Do.
			to	to	
			58 43	46 49	
			to	to	
			59 30	46 36	
			to	to	
			59 42	47 00	
			to	to	
			59 45	47 15	
			to	to	
			59 15	48 02	

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			^o 59 52	^o 48 25	
2243	May 12	Narsarsuak A.B.-----	60 25	48 00	Do.
			60 34	47 30	
2244	do	do	to Simiutak		65 bergs.
2245	do	do	Narsak to seaward		5 growlers, 3 bergy bits.
2246	do	do	Fjord		4 growlers, 3 bergy bits.
2247	do	do	BW-1 harbor		9 growlers, 2 bergy bits.
			BW-3 harbor		
			49 35	53 45	
2248	do	Hydro	50 00	55 00	Pack boundary.
			50 20	55 30	
			51 30	55 30	
2249	do	do	51 20	58 00	
			to east to 5 miles offshore.		Southern boundary of pack.
2250	May 13	U. S. N. S. Johnson	59 12	47 00	Field ice.
			58 37	46 35	
2251	do	Empress of Australia	46 29	53 28	Radar target possible berg.
2252	do	Santa Rita	46 51	50 00	Berg (same as No. 2098).
2253	do	do	47 08	50 09	Berg and growlers (same as No. 2148).
2254	do	Empress of Australia	47 52	49 45	Small growlers.
2255	do	Montrose	46 20	54 33	Berg (same as No. 2235).
2256	do	Unknown vessel	46 00	49 08	Berg (same as No. 2153).
2257	do	Prins Alexander	46 21	53 24	Berg (same as No. 2166).
2258	do	do	46 30	53 10	Berg (same as No. 2179).
2259	do	do	46 31	53 26	Berg (same as No. 2183).
2260	do	do	46 26	53 14	Growler.
2261	do	Montrose	46 07	53 24	Berg (same as No. 2191).
2262	do	Arthur Cross	46 31	53 27	Berg (same as No. 2259).
			58 45	46 30	
2263	do	U. S. S. Edisto	60 20	49 50	Pack boundary.
			60 50	49 20	
			thence east		
2264	May 14	Atlantic	45 34	48 24	Berg (same as No. 2201).
2265	do	do	45 39	48 51	Berg (same as No. 2203).
2266	do	do	45 44	51 33	Berg (same as No. 2225).
2267	do	do	45 46	51 19	Berg (same as No. 2226).
2268	do	do	45 53	51 51	Berg (same as No. 2232).
2269	do	Beaverford	46 18	54 29	Berg (same as No. 2255).
2270	do	Kollbryn	43 35	49 11	Large berg (same as No. 2206).
2271	do	Marengo	46 34	52 36	Berg (same as No. 2234).
2272	do	USN aircraft	55 08	56 10	Berg.
2273	do	Prins Alexander	47 03	50 13	Berg (same as No. 2253).
2274	do	do	47 04	50 14	Berg (same as No. 2148).
2275	do	do	47 05	50 04	Berg (same as No. 2213).
2276	do	do	47 10	49 40	Berg (same as No. 2110).
2277	do	do	47 17	50 01	Berg.
2278	do	do	47 24	49 40	Berg (same as No. 2187).
2279	do	Salacia	44 53	49 13	Berg (same as No. 2067).
2280	do	Marengo	46 27	53 11	Berg (same as No. 2258).
2281	do	do	46 30	53 25	Berg (same as No. 2262).
2282	do	do	46 32	53 28	2 growlers.
2283	do	do	46 32	53 32	Several growlers.
2284	do	Montrose	45 50	49 19	2 bergs (same as Nos. 2150, 2152).
2285	do	Beaverford	45 57	52 32	Berg (same as No. 2218).
2286	do	do	46 04	53 31	Berg (same as No. 2261).
2287	do	do	46 16	53 28	Berg (same as No. 2257).
2288	do	Manchester Shipper	45 56	49 00	Berg (same as No. 2256).
2289	do	Reimer Edvard Fritzen	45 20	51 40	Berg (same as No. 2073).
2290	do	Beaverford	45 45	51 22	2 bergs (same as Nos. 2266, 2267).
2291	do	do	45 58	52 12	Berg (same as No. 2219).
2292	do	do	46 02	51 53	Berg (same as No. 2095).
2293	do	Scythia	46 16	54 31	Growler.
2294	do	Ice Patrol plane	43 32	49 04	Berg (same as No. 2270).
2295	do	do	43 45	49 08	Berg (same as No. 2230).
2296	do	do	43 50	46 35	Small berg (same as No. 2060).
2297	do	do	44 37	46 38	Small berg (same as No. 2064).
2298	do	do	45 14	47 26	Berg (same as No. 2147).
2299	do	do	45 20	51 32	Berg (same as No. 2070).
2300	do	do	45 22	47 03	Berg (same as No. 2125).
2301	do	do	45 31	48 02	Berg and growler (same as No. 2237).
2302	do	do	45 42	48 10	Berg (same as No. 2099).
2303	do	do	45 43	49 47	Berg (same as No. 2200).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
2304	May 14	Ice Patrol plane.....	45 46	50 20	Berg (same as No. 2154).
2305	do	do	45 48	50 00	Berg (same as No. 2094).
2306	do	do	45 49	50 45	Berg (same as No. 2231).
2307	do	do	45 50	51 57	Berg (same as No. 2268).
2308	do	do	45 53	52 08	Berg (same as No. 2291).
2309	do	do	45 55	49 07	Berg (same as No. 2288).
2310	do	do	46 00	50 28	Berg (same as No. 2156).
2311	do	do	46 01	53 29	Berg (same as No. 2286).
2312	do	do	46 07	53 38	Berg (same as No. 2174).
2313	do	do	46 12	53 16	Berg (same as No. 2173).
2314	do	do	46 19	50 42	Berg and growler (same as No. 2147).
2315	do	do	46 19	51 18	Berg (same as No. 2097).
2316	do	do	46 20	53 06	Berg (same as No. 2177).
2317	do	do	46 21	51 17	Berg (same as No. 2102).
2318	do	do	46 23	52 08	Berg (same as No. 2175).
2319	do	do	46 24	53 28	Berg and growler (same as No. 2280).
2320	do	do	46 28	52 32	Berg (same as No. 2271).
2321	do	do	46 29	51 00	Berg (same as No. 2176).
2322	do	do	46 36	53 38	Berg (same as No. 2281).
2323	do	do	46 37	51 35	Small berg (same as No. 2176).
2324	do	do	46 39	48 22	Medium berg (same as No. 2101).
2325	do	do	46 40	48 13	Small berg (same as No. 2108).
2326	do	do	46 42	51 15	Medium berg.
2327	do	do	46 48	49 33	Medium berg (same as No. 2106).
2328	do	do	46 55	49 00	Medium berg (same as No. 2055).
2329	do	do	47 00	52 50	Medium berg (same as No. 2240).
2330	do	do	47 02	52 54	Small berg (same as No. 2181).
2331	do	do	47 06	52 52	Small berg (same as No. 2182).
2332	do	do	47 07	51 15	Medium berg.
2333	do	do	44 28	48 57	Growler.
2334	do	do	45 51	53 08	Do.
2335	do	do	46 31	48 13	Do.
2336	do	do	46 39	52 41	Do.
2337	do	Wilford	46 30	52 35	Berg (same as No. 2320).
2338	May 15	Manchester Pioneer	46 30	53 24	Berg and growlers (same as No. 2319).
2339	do	Scythia	45 56	53 26	Berg (same as No. 2311).
2340	do	do	46 05	53 28	Berg (same as No. 2313).
2341	do	Manchester Shipper	45 37	50 33	Berg (same as No. 2303).
2342	do	Prins Willem Van Oranje	47 02	51 45	Berg.
2343	do	Beaverford	45 42	51 02	Berg (same as No. 2306).
2344	do	do	45 49	50 32	Berg (same as No. 2162).
2345	do	do	45 50	50 06	Berg (same as No. 2224).
2346	do	do	45 52	50 43	Berg (same as No. 2310).
2347	do	do	45 56	49 52	Berg (same as No. 2224).
2348	do	Scythia	45 43	51 50	Berg (same as No. 2307).
2349	do	do	45 46	52 16	Growler.
2350	do	do	45 48	52 13	Do.
2351	do	do	45 52	52 00	Do.
2352	do	do	45 55	52 29	Pieces of field ice.
2353	do	Oslofjord	43 52	48 59	Berg (same as No. 2295).
			60 39	46 20	
			60 35	46 48	
			60 37	47 17	
			60 27	47 42	
2354	do	MATS Keflavik Iceland	60 30	48 30	Pack boundary.
			60 00	48 05	
			59 34	48 10	
			59 39	47 30	
			59 23	47 05	
2355	do	Scythia	45 32	49 48	Growler.
2356	do	Unknown aircraft	46 27	51 29	Large pieces of ice.
2357	do	Consuelo	45 46	49 11	Berg (same as No. 2309).
2358	do	do	45 59	48 58	Berg (same as No. 2096).
2359	do	do	46 20	48 23	Berg.
2360	do	do	46 20	48 30	Berg (same as No. 2324).
2361	do	Wilford	46 48	49 40	Berg (same as No. 2252).
2362	do	do	47 40	49 35	Berg.
2363	do	Beaverford	46 13	48 51	Berg (same as No. 2090).
2364	do	do	46 23	48 25	Berg.
2365	do	do	46 28	48 06	Berg (same as No. 2359).
2366	do	do	46 29	48 20	Berg (same as No. 2325).
2367	do	Narsarsuak AB	Narsak to seaward.		72 bergs, 50 percent drift ice.
2368	do	do	Fjord		6 growlers, 1 bergy bit.
2369	do	do	BW-1 harbor		15 growlers, some drift ice.
2370	do	do	BW-3 harbor		12 growlers, 1 bergy bit.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2371	May 15.	Mormac Mail	43 14	49 07	Berg (same as No. 2294).
2372	do	Scythia	45 34	49 10	Berg (same as No. 2202).
2373	do	do	45 42	49 20	Small berg (same as No. 2284).
2374	do	do	45 45	49 04	Small berg (same as No. 2204).
2375	do	do	45 58	48 49	Berg (same as No. 2358).
2376	do	Clerzo	46 10	50 25	Large berg (same as No. 2159).
2377	do	Manchester Pioneer	47 38	49 48	Berg (same as No. 2392).
2378	do	U. S. N. S. Tamalpais	45 44	52 03	Berg (same as No. 2351).
2379	do	Wilford	46 48	48 55	Large berg (same as No. 2328).
2380	do	do	46 55	48 45	Large berg (same as No. 2104).
2381	do	do	46 58	48 35	Large berg (same as No. 2109).
2382	do	do	47 05	48 49	Large berg (same as No. 2056).
2383	do	Puerto de Bonaigua	45 00	51 35	Large berg (same as No. 2075).
2384	do	Scythia	46 15	48 23	Large berg (same as No. 2360).
2385	do	U. S. N. S. Tamalpais	45 53	51 49	Berg (same as No. 2348).
2386	do	Vibyholm	43 05	49 10	Berg (same as No. 2371).
2387	do	do	43 06	49 05	9 growlers.
2388	do	Unknown aircraft	47 00	51 00	Berg (same as No. 2332).
2389	do	Gripsholm	43 03	49 11	Berg (same as No. 2386).
2390	do	Ice Patrol plane	47 32	53 40	Small berg.
2391	do	do	47 45	49 22	Do.
2392	do	do	47 45	53 11	Do.
2393	do	do	47 50	52 48	Do.
2394	do	do	47 58	49 58	Medium berg.
2395	do	do	48 03	53 13	Small berg.
2396	do	do	48 04	53 07	Do.
2397	do	do	48 08	52 51	Do.
2398	do	do	48 14	52 45	Do.
2399	do	do	48 17	51 46	Medium berg.
2400	do	do	48 31	53 01	Do.
2401	do	do	48 58	52 48	Large berg.
2402	do	do	49 15	53 06	Do.
2403	do	do	49 30	52 30	Medium berg.
2404	do	Isaac Carter	46 11	52 48	Large berg (same as No. 2337).
2405	do	Hydro	BW-1 harbor		1/10 cover, small floes, few bergs.
			60 35	46 20	
			to		
			60 35	47 05	
			to		
			60 25	48 00	
			to		
			60 39	48 15	
			to		
			60 20	48 20	
			to		
2406	do	do	60 00	48 05	Pack boundary.
			to		
			59 35	48 10	
			to		
			59 40	47 30	
			to		
			59 20	47 05	
			to		
			59 00	45 00	
			to		
			59 12	44 14	
2407	do	TWA aircraft	49 17	52 56	Berg (same as No. 2402).
2408	May 16.	Isaac Carter	46 09	53 45	Berg (same as No. 2312).
2409	do	Berni Nuebel	46 32	53 24	Berg and growler (same as No. 2338)
			Fogo Island to		
			Gull Island to 10		
			miles off St.		
			Barbe Island		
			to 5 miles off		
			Grey Islands		
			to Cape Bauld		
			to		
2410	do	Hydro	51 45	55 45	Outer pack boundary.
			to		
			10 miles NW. Belle		
			Isle to 10 miles		
			off Seal Bight to		
			5 miles off		
			Georges Cove.		
2411	do	Arosa Kolm	46 13	53 40	Berg (same as No. 2287).
2412	do	do	46 25	52 10	Berg (same as No. 2318).
2413	do	Zuiderkruis	43 04	49 08	Berg (same as No. 2389).
2414	do	Irmingard	46 36	53 31	Berg (same as No. 2322).
2415	do	Warkworth	47 13	48 59	Berg (same as No. 2278).
2416	do	Grindefjell	46 39	49 20	Berg and growlers (same as No. 2327).
2417	do	Warkworth	47 10	49 21	Berg (same as No. 2391).
2418	do	Berni Nuebel	47 00	51 08	Berg and growlers (same as No. 2285).
2419	do	Canberra	45 26	53 07	Berg.
2420	do	do	45 30	52 58	Berg (same as No. 2285).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2421	May 16	Arosa Kolm	46 33	51 04	Berg (same as No. 2328).
2422	do	do	46 56	51 11	Berg (same as No. 2418).
2423	do	Canberra	45 29	52 33	Berg (same as No. 2350).
2424	do	do	45 35	52 07	Berg (same as No. 2290).
2425	do	do	45 43	52 19	Berg (same as No. 2378).
2426	do	do	45 45	52 12	Berg (same as No. 2385).
2427	do	do	45 46	52 06	Berg (same as No. 2074).
2428	do	Irmingard	46 55	50 53	2 bergs (same as Nos. 2273, 2391).
2429	do	Warkworth	46 57	50 43	Berg (same as No. 2277).
2430	do	Adolph Gleue	46 17	53 27	Berg and growlers (same as No. 2340).
2431	do	do	46 23	53 23	Berg (same as No. 2316).
2432	do	Arosa Kolm	47 05	49 07	Berg (same as No. 2140).
2433	do	Zinnia	47 47	50 02	Berg (same as No. 2394).
2434	do	Canberra	45 34	51 14	Berg (same as No. 2290).
2435	do	do	45 40	51 04	Berg (same as No. 2343).
2436	do	do	45 41	50 35	Growler.
2437	do	Torsholm	46 40	48 25	Berg (same as No. 2056).
2438	do	do	46 43	48 34	Berg (same as No. 2380).
			55 30	1 58 45	
				to	
			55 00	57 35	
				to	
			54 40	57 00	
				to	
			54 40	56 25	
				to	
			54 35	56 15	
				to	
			54 35	55 30	
				to	
			54 25	55 40	
				to	
			54 00	55 05	
2439	do	Goose Bay AB		to	Pack boundary.
			53 10	55 25	
				to	
			52 55	55 40	
				to	
			52 50	55 20	
				to	
			52 40	55 15	
				to	
			5 miles off Battle		
			Harbor to		
			52 15	55 12	
				to	
			8 miles off St. Peter		
			Bay to		
			51 50	55 45	
				to Cape Bauld	
			North Hare Bay to		
			10 miles off Grey		
			Islands to		
			50 30	55 30	
2440	do	do		to	Do.
			50 30	55 05	
				to	
			50 10	55 15	
				to Fogo Island	
2441	do	Ice Patrol plane	43 08	49 03	Berg (same as No. 2413).
2442	do	do	43 19	49 06	Berg (same as No. 2353).
2443	do	do	44 48	49 05	Berg (same as No. 2279).
2444	do	do	45 02	49 38	Berg (same as No. 2066).
2445	do	do	45 20	50 50	Berg (same as No. 2071).
2446	do	do	45 22	49 31	Berg (same as No. 2261).
2447	do	do	45 31	50 45	Berg (same as No. 2304).
2448	do	do	45 32	50 46	Berg (same as No. 2305).
2449	do	do	45 38	52 06	Berg (same as No. 2421).
2450	do	do	45 49	52 21	Berg (same as No. 2425).
2451	do	do	46 05	51 36	Berg (same as No. 2315).
2452	do	do	46 06	52 54	Berg (same as No. 2404).
2453	do	do	46 21	51 30	Berg (same as No. 2317).
2454	do	do	46 22	51 18	Berg (same as No. 2321).
2455	do	do	46 22	51 21	Berg (same as No. 2421).
2456	do	do	46 23	53 25	Berg (same as No. 2431).
2457	do	do	46 23	53 31	Berg (same as No. 2430).
2458	do	do	46 26	53 44	Berg (same as No. 2411).
2459	do	do	46 28	53 36	Berg (same as No. 2414).
2460	do	do	46 36	52 18	Berg (same as No. 2412).
2461	do	do	46 36	53 31	Berg (same as No. 2409).
2462	do	do	46 52	53 42	Berg (same as No. 2295).
2463	do	do	46 54	52 51	Berg (same as No. 2329).
2464	do	do	46 56	52 54	Berg (same as No. 2330).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
2465	May 16.	Ice Patrol plane	46 59	52 48	Berg (same as No. 2331).
2466	..do.	..do.	47 20	52 36	Berg (same as No. 2039).
2467	..do.	..do.	44 50	48 59	Growler.
2468	..do.	..do.	45 31	50 52	Do.
2469	..do.	..do.	45 31	52 36	Do.
2470	..do.	..do.	45 50	52 34	Do.
2471	..do.	..do.	45 51	52 14	Do.
2472	..do.	..do.	45 54	52 14	Do.
2473	..do.	..do.	46 29	53 28	Do.
2474	..do.	..do.	46 52	52 51	Do.
2475	May 17	Adolph Gleue	47 18	49 34	Berg (same as No. 2446).
2476	..do.	Irmgard	47 15	49 26	Radar target possible berg.
2477	..do.	Canberra	45 54	48 44	Do.
2478	..do.	Unknown vessel.	44 51	46 11	Berg (same as No. 2297).
2479	..do.	U. S. C. G. cutter Sebago	47 00	50 57	Berg (same as No. 2428).
2480	..do.	..do.	48 52	49 48	Radar target possible berg.
2481	..do.	Adolph Gleue	47 00	51 00	Berg (same as No. 2428).
2482	..do.	Canberra	45 58	48 31	Radar target possible berg.
2483	..do.	..do.	45 59	48 20	Do.
2484	..do.	..do.	46 14	48 06	Do.
2485	..do.	Wilhelms	46 56	51 04	Large berg (same as No. 2422).
2486	..do.	Poseidon	46 37	48 24	2 bergs and 2 growlers (same as Nos. 2437, 2438).
2487	..do.	Prins Philips Willem	45 19	53 17	Berg (same as No. 2419).
2488	..do.	Torsholm	45 57	50 25	Berg (same as No. 2376).
2489	..do.	..do.	46 13	51 48	Berg (same as No. 2323).
2490	..do.	..do.	46 32	49 15	Berg (same as No. 2416).
2491	..do.	Unknown vessel.	44 37	48 56	Berg (same as No. 2443).
2492	..do.	Ophelia	47 20	49 00	Berg (same as No. 2415).
2493	..do.	Prins Philips Willem	45 37	52 39	Berg (same as No. 2450).
2494	..do.	Poseidon	46 32	49 08	Berg (same as No. 2372).
2495	..do.	Torsholm	46 07	52 11	Berg (same as No. 2452).
2496	..do.	..do.	46 00	52 53	Growler.
2497	..do.	Wilhelms	47 19	49 39	Large berg (same as No. 2377).
2498	..do.	Comandante Teneriro	46 44	49 50	2 bergs (same as Nos. 2276, 2361).
2499	..do.	..do.	46 46	49 48	Berg (same as No. 2417).
2500	..do.	Andria	44 53	45 22	Berg (same as No. 2300).
2501	..do.	Wabana	46 23	53 41	Berg (same as No. 2458).
2502	..do.	..do.	46 24	53 51	5 small growlers.
2503	..do.	..do.	46 26	53 59	Growler.
2504	..do.	Prins Alexander	45 58	52 15	Berg (same as No. 2426).
2505	..do.	USN aircraft	60 30	53 30	1 large berg, 6 small bergs.
2506	..do.	Unknown aircraft	49 20	53 00	Berg.
2507	..do.	..do.	49 40	53 20	Do.
2508	..do.	Torsholm	46 08	53 59	Berg (same as No. 2408).
2509	..do.	Poseidon	46 05	50 22	Large berg (same as No. 2314).
2510	..do.	Prins Philips Willem	45 44	51 07	Berg (same as No. 2435).
			56 25	59 10	
			54 40	55 35	
2511	..do.	Hydro	54 00	55 10	Pack boundary.
			to Belle Isle to Cape Bauld to outer Hare Bay to Grey Islands to Fogo Island		
2512	May 18	Stadrotterdam	47 58	52 04	Berg.
2513	..do.	Siredal	47 56	52 04	Berg (same as No. 2512).
2514	..do.	Hispania	45 38	53 27	Berg (same as No. 2339).
2515	..do.	Marquette	44 47	46 05	Berg (same as No. 2478).
2516	..do.	..do.	44 52	47 10	Berg (same as No. 2301).
2517	..do.	..do.	45 00	46 10	Berg (same as No. 2298).
2518	..do.	Ophelia	46 29	52 13	Berg (same as No. 2460).
2519	..do.	Leanna	46 13	53 17	Berg (same as No. 2495).
2520	..do.	Monsun	46 24	48 40	2 small bergs (same as No. 2486).
2521	..do.	USN plane	NW. of Cape Bauld		6 bergs.
2522	..do.	..do.	Near Belle Isle		15 bergs.
2523	..do.	..do.	SE. of Brehat		Do.
2524	..do.	Canadian Department of Transport.	Point Amour		Close pack ice.
2525	..do.	..do.	Off Belle Isle		Scattered strings of field ice.
2526	..do.	Leanna	46 30	52 02	Berg (same as No. 2518).
2527	..do.	Monsun	46 22	49 24	Berg (same as No. 2490).
2528	..do.	Leanna	46 49	51 00	Berg (same as No. 2429).
2529	..do.	Kaigata	46 45	48 21	Growler.
2530	..do.	Tifon	46 03	52 20	Berg (same as No. 2504).
2531	May 19	Sagitta	46 07	53 50	Berg (same as No. 2508).
2532	..do.	Beaverlake	46 56	50 30	Growler.
2533	..do.	Beaverlodge	46 35	53 32	Berg (same as No. 2461).
2534	..do.	..do.	46 35	53 58	Berg (same as No. 2459).
2535	..do.	..do.	46 36	53 41	2 growlers.
2536	..do.	Monsun	45 54	52 40	Berg (same as No. 2530).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2537	May 19	Fort Hamilton	46 12	54 13	Berg (same as No. 2531).
2538	do	do	46 20	54 00	Berg (same as No. 2501).
2539	do	do	46 25	53 15	Berg (same as No. 2456).
2540	do	Siredal	48 17	51 59	Berg.
2541	do	Monsum	45 57	53 12	Berg and 9 growlers (same as No. 2519).
2542	do	Cheticamp	46 36	53 34	2 bergs.
2543	do	do	46 37	53 50	Berg and 3 growlers (same as No. 2457).
2544	do	USAF aircraft	45 00	45 00	Berg.
2545	do	USN aircraft	Farmyard Island		12 bergs.
2546	do	do	Byron Bay		24 bergs.
2547	do	do	59 40	58 00	6 bergs.
2548	do	Hydro	Fogo Island to		} Pack boundary.
			50 15	53 50	
			to		
			50 22	54 53	
2549	do	do	to		} Do.
			50 50	55 15	
			to		
			Grey Islands Harbor		
2550	do	do	Belle Isle to		} Do.
			52 30	54 40	
			to		
			53 20	54 35	
2551	May 20	Lavoro	53 30	55 20	}
			to		
			54 20	54 50	
			to		
2552	do	Tifon	54 30	55 00	Many bergs.
2553	do	Hydro	Simiutak to seaward.		
2554	do	do	44 43	44 07	Berg and 2 growlers (same as No. 2500).
2555	do	do	46 05	49 37	Berg and 2 growlers (same as No. 2527).
2556	do	do	Narsak to seaward		9/10 to 10/10 brash, many bergy bits, and growlers.
2557	do	do	BW-1 harbor		Few bergy bits and growlers.
2558	do	do	BW-3 harbor		9/10 to 10/10 brash, few bergy bits and growlers.
2559	do	do	53 50	54 55	2 bergs.
2560	do	do	54 15	55 10	6 bergs.
2561	do	do	54 20	55 42	4 bergs.
2562	do	do	54 20	56 23	9 bergs.
2563	do	do	54 10	56 48	Do.
2564	do	Goose Bay AB	Labrador coastal area between 52°00' N. and 55°00' N.		100 bergs.
2565	May 21	L'Aventure	42 43	49 26	Large berg (same as No. 2442).
2566	do	Mormacisle	44 15	44 06	3 growlers (same as No. 2551).
2567	do	Hydro	Fogo Island to		} Pack boundary.
			50 15	53 50	
			to		
			50 15	54 40	
2568	do	Hydro	to		} Pack boundary.
			50 50	55 15	
			to		
			50 45	55 30	
2569	do	Hydro	to		} Pack boundary.
			51 00	55 30	
			to		
			51 15	55 00	
2570	do	Hydro	to		} Pack boundary.
			51 20	55 10	
			to		
			51 20	55 10	
2571	do	Hydro	to Coast Fichot Cove.		} Berg (same as No. 2516).
			44 37	46 56	
			NE tip Belle Isle to		
			53 00	54 30	
2572	do	Hydro	53 30	55 15	}
			to		
			54 20	54 45	
			to		
2573	do	Hydro	55 30	55 30	}
			to		
			55 00	57 30	
			to		
2574	do	Hydro	55 30	58 30	}
			to		
			56 00	58 00	
			to		
2575	do	Hydro	56 00	56 30	}
			to		
			57 30	59 40	
			to		

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2567	May 21	Narsarssuak AB.	BW-1 harbor		3 growlers.
2568	..do.	..do.	BW-3 harbor		12 growlers, 3 bergy bits, 15% brash.
			51 40	55 15	
			to		
2569	..do.	Hydro	51 45	55 30	
			to		Pack boundary.
			52 00	55 30	
			to		
2570	May 22	Columbia	52 15	55 10	Growler.
2571	..do.	Oris	45 46	45 28	Do.
2572	..do.	Prins Frederik Willem	47 12	50 45	Berg (same as No. 2265).
2573	..do.	Desdemona	44 51	49 05	Growler.
2574	..do.	Manchester Explorer	47 20	50 48	Berg (same as No. 2497).
2575	..do.	Columbia	47 18	49 45	Berg (same as No. 2572).
2576	..do.	Joliet	44 56	49 07	Berg (same as No. 2441).
2577	..do.	Fanad Head	42 13	49 55	3 growlers.
2578	..do.	Goodwood	46 40	52 10	Do.
2579	..do.	Prins Willem Van Oranje	46 36	53 07	Berg (same as No. 2538).
2580	..do.	Asia	46 20	54 17	Berg (same as No. 2485).
2581	..do.	Mauretania	46 47	51 13	Berg (same as No. 2576).
2582	..do.	Hydro	41 58	49 44	Few growlers.
2583	..do.	..do.	BW-1 harbor		2/10 brash, few bergy bits.
2584	May 23	Prins Willem Van Oranje	BW-3 harbor		Berg.
2585	..do.	Luciana	47 59	47 58	Berg (same as No. 2539).
2586	..do.	Maretro	46 24	53 12	Berg (same as No. 2499).
2587	..do.	Polaris	46 20	49 30	Berg (same as No. 2581).
2588	..do.	L'Aventure	41 50	49 35	Berg (same as No. 2498).
2589	..do.	..do.	46 16	49 33	Berg (same as No. 2586).
2590	..do.	Falco	46 21	49 35	Berg (same as No. 2588).
2591	..do.	U. S. N. S. Kelley	46 12	49 22	Berg (same as No. 2585).
2592	..do.	Luciana	46 25	53 18	Berg (same as No. 2481).
2593	..do.	Nieuw Amsterdam	46 53	51 15	Berg (same as No. 2587).
			41 53	49 17	
			60 25	60 50	
			to		
2594	..do.	Hydro	56 00	58 00	Pack boundary.
			to		
			55 45	55 30	
			to		
			52 40	54 45	
			to Cape Bauld		
2595	May 24	Atlantic	48 20	46 39	Radar target possible berg.
2596	..do.	Agathi	41 55	49 22	1 berg and 4 growlers (same as No. 2593).
2597	..do.	Joao Martins	47 20	51 15	Berg (same as No. 2453).
2598	..do.	U. S. N. S. Mission	42 00	49 54	Berg (same as No. 2491).
		Los Angeles			
2599	..do.	U. S. N. S. Johnson	46 25	53 20	Berg (same as No. 2591).
2600	..do.	Beaverglen	47 03	51 18	Berg (same as No. 2479).
2601	..do.	Monica Smith	47 27	50 57	Berg.
2602	..do.	Ingrid Weide	46 57	49 50	Berg (same as No. 2574).
			(Cape Thorvaldsen		
			to		
			60 00	46 30	
			to		
2603	..do.	Hydro	59 20	47 30	Pack boundary.
			to		
			58 50	44 15	
			to		
			59 10	42 45	
			to		
			60 25	42 30	
			thence NW.		
2604	..do.	..do.	Fjord		Few bergs.
2605	..do.	..do.	BW-1 harbor		4/10 to 7/10 cover.
2606	May 25	Georgic	46 24	53 19	Berg (same as No. 2599).
2607	..do.	..do.	47 04	51 28	Berg (same as No. 2597).
2608	..do.	..do.	47 49	49 35	Berg.
2609	..do.	Belle Isle radio	Strait of Belle Isle.		Heavy field ice.
			Cape Norman to		
			Point Amour.		
2610	..do.	Ingrid Weide	46 33	52 26	Berg (same as No. 2513).
2611	..do.	U. S. N. S. Kelley	46 36	53 35	Berg and growler (same as No. 2540).
2612	..do.	Heelsun	41 51	49 22	Berg (same as No. 2598).
2613	..do.	..do.	42 15	48 59	Berg (same as No. 2562).
2614	..do.	Ryholm	47 03	51 10	Berg and growler (same as No. 2601).
2615	..do.	..do.	47 05	51 19	Berg and growler (same as No. 2600).
2616	..do.	..do.	47 05	51 43	Berg and growler.
2617	..do.	..do.	47 05	51 53	Berg.
2618	..do.	Beaverbrae	47 03	51 07	Berg (same as No. 2614).
2619	..do.	..do.	47 05	51 20	Berg (same as No. 2615).
2620	..do.	..do.	46 59	51 09	3 growlers.
2621	..do.	Durbam Trader	48 25	51 35	Berg.
2622	..do.	Gileanes	46 37	50 50	Berg (same as No. 2528).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2623	May 25	Commandante Tenreiro	46 42	50 55	Berg (same as No. 2622).
2624	do	U. S. S. Opportune	46 30	54 18	Berg (same as No. 2534).
2625	do	Beaverbrae	47 04	51 43	Berg (same as No. 2616).
2626	do	Ice Patrol plane	42 25	49 16	Medium berg (same as No. 2613).
2627	do	do	43 48	49 17	Radar target possible berg.
2628	do	do	43 51	49 22	Small berg (same as No. 2302).
2629	do	do	43 56	49 20	Radar target possible berg.
2630	do	do	44 10	49 38	Do.
2631	do	do	44 10	49 48	5 radar targets possible bergs.
2632	do	do	44 32	49 25	Radar target possible berg.
2633	do	do	44 37	49 22	Do.
2634	do	do	44 38	51 09	Do.
2635	do	do	44 40	49 23	Do.
2636	do	do	44 40	50 25	Do.
2637	do	do	44 42	49 28	Do.
2638	do	do	44 43	50 11	Do.
2639	do	do	44 48	50 20	Do.
2640	do	do	44 57	50 42	Do.
2641	do	do	44 57	51 00	Do.
2642	do	do	45 00	50 56	Do.
2643	do	do	45 05	51 50	Do.
2644	do	do	45 10	50 31	2 radar targets possible berg.
2645	do	do	45 15	50 59	Radar target possible berg.
2646	do	do	45 15	52 10	Do.
2647	do	do	45 18	52 04	Do.
2648	do	do	45 22	51 39	Do.
2649	do	do	45 23	52 08	Do.
2650	do	do	45 25	51 20	Do.
2651	do	do	46 29	53 33	Large berg (same as No. 2533).
2652	do	do	46 36	53 45	Radar target possible berg.
2653	do	do	46 37	53 40	Do.
2654	May 26	Enid Victory	42 09	48 56	Berg (same as No. 2626).
2655	do	Marengo	47 06	51 23	Berg (same as No. 2619).
2656	do	Arosa Star	46 27	53 18	Berg and many growlers (same as No. 2906).
2657	do	Aseania	47 38	49 36	Berg (same as No. 2608).
2658	do	Christen Smith	41 10	49 30	Berg (same as No. 2596).
2659	do	Aruthur Cross	47 16	52 38	Berg and several growlers (same as No. 2466).
2660	do	Marengo	47 50	49 38	Berg (same as No. 2657).
2661	do	Sneaton	46 53	48 23	Berg (same as No. 2381).
2662	do	Ascania	47 04	51 08	Berg (same as No. 2592).
2663	do	do	47 08	51 05	Berg (same as No. 2618).
2664	do	U. S. C. G. Cutter Duane	47 06	51 47	Small berg (same as No. 2625).
2665	do	Ice Patrol plane	41 19	49 15	Berg (same as No. 2658).
2666	do	do	42 27	48 48	Berg (same as No. 2654).
2667	do	Sneaton	46 10	49 50	Berg (same as No. 2589).
2668	do	Nova Scotia	47 05	52 51	Berg (same as No. 2393).
2669	do	do	47 16	52 40	Berg.
2670	do	do	47 19	52 42	Berg (same as No. 2659).
2671	do	Nelly	46 34	54 01	Berg (same as No. 2543).
2672	do	Ascania	46 32	53 56	Berg (same as No. 2671).
2673	do	Konsul	47 02	51 51	Berg (same as No. 2617).
2674	do	Nova Scotia	46 59	52 50	Berg (same as No. 2465).
2675	do	do	47 11	52 49	Berg.
2676	do	do	46 31	53 18	Growler.
2677	do	do	46 57	52 52	Do.
2678	do	U. S. C. G. Cutter Duane	47 28	51 02	Berg.
			67 20	57 45	
2679	do	Hydro	69 00	56 50	Main pack boundary.
			70 00	57 30	
			71 00	57 00	
			72 00	58 00	
2680	do	do	35 miles east of Cape Discord to 41 miles south of Cape Farewell to 90 miles south of Sardinia.		Pack boundary.
2681	May 27	Empress of Australia	46 34	54 00	Berg (same as No. 2672).
2682	do	U. S. S. Lindenwald	46 41	50 45	Berg (same as No. 2623).
2683	do	Ice Patrol plane	40 59	48 40	Berg (same as No. 2665).
2684	do	do	41 45	49 10	Berg (same as No. 2612).
2685	do	Najade	46 28	53 22	Berg (same as No. 2656).
2686	do	Birte Hugo Stinnes	44 47	49 12	Berg (same as No. 2575).
2687	do	Gaspe	46 49	52 52	Berg (same as No. 2674).
2688	do	do	46 32	53 09	Growler.
2689	do	do	46 33	53 10	Do.
2690	do	do	46 34	53 10	Do.
2691	do	USAF aircraft	46 50	51 50	Berg (same as No. 2673).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude		West longitude		Description
			°	'	°	'	
2692	May 27	Laguna Math	41	05	48	38	Berg (same as No. 2683).
2693	do	Gaspe	46	47	52	55	Growler.
2694	do	do	46	48	52	54	Do.
2695	do	Salacia	46	40	52	06	Berg (same as No. 2664).
2696	do	do	46	41	51	37	Berg (same as No. 2580).
2697	do	Najade	46	22	54	19	Berg (same as No. 2579).
2698	do	Empress of France	46	25	54	23	Berg (same as No. 2624).
2699	do	do	46	26	53	21	Berg and growler (same as No. 2685).
2700	do	do	46	33	53	55	Berg (same as No. 2651).
2701	do	Pindar	48	03	49	43	Berg.
2702	do	Ramore Head	47	07	51	13	Berg (same as No. 2662).
2703	do	do	47	10	51	03	Berg (same as No. 2663).
2704	do	do	47	15	49	52	Berg (same as No. 2660).
2705	do	U. S. S. Lindenwald	46	41	50	45	Berg (same as No. 2682).
2706	May 28	Makefjell	47	17	49	50	Berg (same as No. 2704).
2707	do	Aeolia	46	55	52	40	Berg (same as No. 2669).
2708	do	do	47	02	52	45	Berg (same as No. 2675).
2709	do	do	47	05	52	49	Berg (same as No. 2668).
2710	do	Olympia	42	06	48	51	Berg (same as No. 2666).
2711	do	Black Falcon	40	47	48	20	Berg (same as No. 2692).
2712	do	Empress of France	47	56	49	40	Berg.
2713	do	Assyria	42	03	48	54	Berg (same as No. 2710).
2714	do	River Afton	47	57	49	36	Berg (same as No. 2712).
2715	do	Ramore Head	46	24	54	20	Berg (same as No. 2697).
2716	do	Beaverburn	47	26	48	43	2 bergs (same as No. 2584).
2717	do	Suaneffjell	47	17	51	06	Berg (same as No. 2703).
2718	do	Beaverburn	47	21	49	40	Berg (same as No. 2706).
2719	do	do	47	23	49	31	Berg.
2720	do	do	47	32	49	35	Do.
2721	do	U. S. C. G. Cutter Evergreen	46	38	53	54	Berg (same as No. 2700).
2722	do	Ice Patrol plane	41	00	48	40	Berg (same as No. 2711).
2723	do	do	44	18	49	09	Berg (same as No. 2686).
2724	do	do	46	27	54	12	Berg (same as No. 2681).
2725	do	do	46	30	53	15	Berg (same as No. 2699).
2726	do	do	46	31	50	38	Berg (same as No. 2705).
2727	do	do	46	33	53	52	Berg (same as No. 2721).
2728	do	do	46	33	54	27	Berg (same as No. 2698).
2729	do	do	46	42	52	39	Berg (same as No. 2707).
2730	do	do	46	42	52	40	Berg (same as No. 2729).
2731	do	do	46	45	52	46	Berg (same as No. 2708).
2732	do	do	46	47	51	31	Berg (same as No. 2696).
2733	do	do	46	51	52	30	Berg.
2734	do	do	46	59	52	51	Berg (same as No. 2709).
2735	do	do	47	05	52	46	Berg (same as No. 2670).
2736	do	do	47	10	51	15	Berg (same as No. 2702).
2737	do	do	47	10	52	33	Berg.
2738	do	do	47	12	51	00	Berg (same as No. 2717).
2739	do	do	47	17	51	41	Berg (same as No. 2655).
2740	do	do	47	26	51	06	Berg.
2741	do	do	47	26	52	36	Do.
2742	do	do	42	06	48	52	Growler.
2743	do	do	42	41	48	48	Do.
2744	do	do	46	21	53	00	Do.
2745	do	do	46	50	52	43	Do.
2746	do	do	46	57	52	54	Do.
2747	do	do	47	39	52	35	Do.
2748	do	Manchester Trader	46	48	52	35	Berg (same as No. 2733).
2749	do	do	46	51	52	44	Berg (same as No. 2737).
2750	do	do	46	59	52	45	Berg (same as No. 2735).
2751	do	do	47	10	51	35	Berg (same as No. 2739).
2752	do	do	47	31	50	40	Berg.
2753	do	Villanger	46	42	51	42	Berg (same as No. 2732).
2754	do	Beaverburn	47	04	51	07	Berg (same as No. 2736).
2755	do	do	47	07	50	48	Berg (same as No. 2738).
2756	do	do	47	10	51	43	Berg (same as No. 2751).
2756	do	Unknown aircraft	49	37	52	03	Berg.
2758	do	do	49	37	52	41	Do.
2759	do	Samaria	46	24	54	18	Berg (same as No. 2715).
2760	do	do	46	35	53	58	Berg (same as No. 2727).
2761	do	Beaverburn	46	40	52	37	Berg and growlers (same as No. 2748).
2762	do	Homeland	42	23	48	27	Berg (same as No. 2628).
2763	do	Holstein	46	55	48	00	Berg (same as No. 2661).
2764	May 29	Samaria	46	26	53	20	Berg (same as No. 2725).
2765	do	Prometheus	40	31	48	37	Berg (same as No. 2722).
2766	do	Stavangerfjord	46	42	52	38	2 bergs and growlers (same as No. 2761).
2767	do	Rimon	40	30	48	21	Berg (same as No. 2765).
2768	do	Samaria	47	05	50	38	Berg (same as No. 2755).
2769	do	Stavangerfjord	47	11	51	30	Bergs (same as No. 2756).
2770	do	U. S. S. Opportune	60	55	53	07	Berg.
2771	do	do	61	00	52	40	Do.
2772	do	do	61	12	52	54	Do.
2773	do	Stavangerfjord	47	31	50	56	Berg (same as No. 2752).
2774	do	Holstein	46	43	50	04	Berg (same as No. 2602).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2775	May 29	Svanebjell	46 42	52 39	Berg (same as No. 2766).
2776	do	do	46 43	52 48	Do.
2777	do	Samaria	47 08	49 25	Berg (same as No. 2718).
2778	do	do	47 11	49 13	Berg (same as No. 2719).
2779	do	do	47 23	49 13	Berg (same as No. 2720).
2780	do	McGraw	40 32	48 23	Berg and growler (same as No. 2767).
2781	do	Cape Race Radio	46 32	53 17	Large berg (same as No. 2764).
2782	do	do	46 38	52 54	Large berg (same as No. 2776).
2783	do	do	46 42	52 56	Large berg (same as No. 2746).
2784	do	Ryndam	40 30	48 21	Berg (same as No. 2780).
2785	do	Mauretania	40 21	48 23	Radar target possible berg (same as No. 2784).
2786	do	Ice Patrol plane	46 57	52 48	Berg.
2787	do	do	47 11	52 40	Do.
2788	do	do	49 00	53 09	Do.
2789	do	do	Within 25 miles and N.E. of Fogo Island.		7 bergs.
2790	do	do	50 45	55 03	Medium berg.
2791	do	do	50 52	55 03	Large berg.
2792	do	do	51 04	54 26	Do.
2793	do	do	51 23	54 53	Small berg.
2794	do	do	Close inshore Hare Bay to Cape Bauld.		11 bergs.
2795	do	do	51 44	54 28	Medium berg.
2796	do	do	Area between Cape Bauld and Belle Isle.		30 bergs.
2797	do	do	Strait of Belle Isle.		50 bergs.
2798	do	do	Area between Belle Isle and Labrador coast.		25 bergs.
2799	do	do	52 08	53 28	Small berg.
			49 31	53 49	
			49 54	53 51	
			49 56	53 20	
			49 41	53 11	
			49 47	52 41	
2800	do	do	49 59	52 51	Field ice limits.
			50 09	53 45	
			50 05	54 15	
2801	do	do	SE. side Strait of Belle Isle.		Scattered to broken field ice.
2802	do	do	Vicinity Point Amour.		Do.
2803	do	do	10 miles all directions from point 11 miles ESE. of Cape Bauld.		Ice field.
2804	do	do	10 miles all directions from point 11 miles N.E. of Belle Isle.		Do.
2805	do	Hydro	Fogo Island to Funk Island to 50 10 | 55 00		Pack boundary.
			to Grey Island to Fichot Island to Coney Head.		
			Hawke Island to 52 30 | 55 00		
2806	do	do	53 00	54 00	Do.
			54 00	54 00	
2807	May 30	Atlantic	46 25	53 16	Berg (same as No. 2781).
2808	do	do	46 35	53 53	Berg (same as No. 2760).
2809	do	do	46 37	52 39	Berg (same as No. 2729).
2810	do	do	46 41	52 30	Berg (same as No. 2695).
2811	do	do	46 44	52 42	Berg (same as No. 2775).
2812	do	do	47 41	48 58	Berg (same as No. 2714).
2813	do	Columbia	46 02	52 32	6 growlers.
2814	do	U. S. N. S. Valdez	46 26	54 11	Berg (same as No. 2759).
2815	do	U. S. N. S. Eltinge	40 10	48 15	Large berg (same as No. 2785).
2816	do	U. S. N. S. Valdez	46 26	53 17	Berg (same as No. 2807).
2817	do	Sagat	46 45	47 47	Berg (same as No. 2763).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2818	May 30	Sagat.....	° / 46 46	° / 48 21	Berg (same as No. 2716).
2819	do	do.....	46 52	48 05	Do.
2820	do	Columbia.....	46 23	50 09	Small berg (same as No. 2667).
2821	do	U. S. N. S. Valdez.....	46 36	52 41	Berg (same as No. 2809).
2822	do	do.....	46 48	52 49	Berg (same as No. 2734).
2823	do	do.....	47 19	52 38	Berg (same as No. 2741).
2824	do	U. S. C. G. Cutter McCulloch.....	46 39	52 40	Berg (same as No. 2821).
2825	do	do.....	46 43	52 31	Berg (same as No. 2810).
2826	do	do.....	46 47	52 46	Berg (same as No. 2822).
2827	do	U. S. A. F. aircraft.....	50 45	54 45	Berg.
2828	do	U. S. C. G. Cutter McCulloch.....	46 25	53 16	Berg (same as No. 2816).
2829	do	U. S. C. G. cutter Androscoggin.....	46 37	53 51	Berg (same as No. 2808).
2830	do	Callisto.....	46 24	54 09	Berg (same as No. 2814).
2831	do	do.....	46 27	53 17	Berg (same as No. 2828).
2832	do	Columbia.....	46 35	48 25	Berg (same as No. 2818).
2833	do	do.....	46 52	48 02	Berg (same as No. 2819).
2834	do	do.....	46 56	48 31	Berg (same as No. 2778).
2835	do	do.....	47 02	47 54	Growlers.
2836	May 31	Media.....	47 25	50 53	Berg (same as No. 2773).
2837	do	Prins Maurits.....	46 18	48 21	Berg (same as No. 2832).
2838	do	Cortona.....	46 41	52 32	Berg (same as No. 2829).
2839	do	Sondresstrom AB.....	62 38	56 45	Several bergs.
2840	do	Cortona.....	46 25	53 16	Berg (same as No. 2831).
2841	do	do.....	46 30	54 15	Berg (same as No. 2724).
2842	do	do.....	46 39	53 42	Berg (same as No. 2829).
2843	do	Ice Patrol plane.....	40 00	48 35	Berg (same as No. 2815).
2844	do	Mormamail.....	40 02	48 32	Berg (same as No. 2843).
2845	do	Transatlantic.....	46 25	47 05	Berg (same as No. 2817).
2846	do	Sondresstrom AB.....	61 50	56 00	6 large bergs.
2847	do	do.....	62 35	55 15	Berg.
2848	do	U. S. S. Opportune.....	64 04	53 36	Do.
2849	do	do.....	64 06	53 46	Do.
2850	do	do.....	64 09	54 02	Do.
2851	do	do.....	64 15	53 54	Do.
2852	do	do.....	64 42	53 45	Do.
			56 00	58 15	
			57 10	59 15	
			58 00	58 55	
2853	do	Hydro.....	58 50	60 00	Pack boundary.
			59 50	59 00	
			60 15	58 10	
			60 45	59 10	
2854	June 1	Poseidon.....	46 23	54 05	Berg (same as No. 2830).
2855	do	Manchester Regiment.....	46 26	54 18	Berg (same as No. 2841).
2856	do	Zuiderkruis.....	39 51	48 30	Berg (same as No. 2844).
2857	do	Poseidon.....	46 28	52 24	Berg (same as No. 2838).
2858	do	do.....	46 31	52 26	Berg (same as No. 2824).
2859	do	Ellan.....	47 07	49 58	Berg (same as No. 2774).
2860	do	Unknown aircraft.....	43 20	50 00	Berg (same as No. 2723).
2861	do	Warkworth.....	46 26	53 14	Berg (same as No. 2840).
2862	do	Manchester Regiment.....	46 40	52 55	Berg (same as No. 2783).
2863	do	do.....	46 45	52 18	Berg (same as No. 2753).
2864	do	Fort Hoskins.....	46 27	53 14	Berg (same as No. 2861).
2865	do	Ice Patrol plane.....	39 51	48 30	Berg (same as No. 2856).
2866	do	do.....	46 28	53 01	Berg.
2867	do	do.....	46 29	52 21	Do.
2868	do	do.....	46 44	52 11	Do.
2869	do	do.....	46 41	52 50	Growler.
2870	do	do.....	46 46	53 42	Do.
2871	do	Miemae.....	43 12	47 42	Berg (same as No. 2762).
2872	do	U. S. N. S. Geiger.....	43 00	47 29	Large berg (same as No. 2871).
2873	do	U. S. C. G. Cutter Androscoggin.....	46 26	52 20	Berg (same as No. 2857).
2874	do	Warkworth.....	46 31	52 22	Large berg (same as No. 2858).
2875	do	U. S. C. G. Cutter Androscoggin.....	46 34	53 19	Berg (same as No. 2864).
2876	do	Warkworth.....	46 41	52 17	Berg (same as No. 2863).
2877	do	Poseidon.....	46 49	50 54	Growler.
2878	do	Cairngowan.....	46 56	52 52	Berg.
2879	do	Manchester Regiment.....	47 28	50 59	Growler.
2880	do	Dione.....	47 33	49 11	Berg (same as No. 2779).
2881	do	do.....	47 37	48 40	Berg (same as No. 2812).
2882	do	Arundo.....	48 07	52 40	Berg.
2883	do	U. S. S. Opportune.....	61 07	53 00	Do.
2884	do	do.....	62 10	53 03	Do.
2885	do	do.....	63 34	53 32	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2886	June 1	U. S. S. Opportune.....	63 40	53 37	Berg.
2887	do.	do.	64 00	53 12	Do.
			50 15	54 15	
			50 35	55 10	
			51 00	55 25	
2888	do.	Hydro.....	10 miles east of Belle Isle to 53 40	54 10	Pack boundary.
			54 15	54 00	
			55 15	54 00	
			55 02	54 00	
			52 45	55 30	
2889	do.	USN aircraft.....	52 45	54 00	Do.
			51 50	54 30	
			51 40	55 15	
			to Belle Isle to Red Bay		
2890	June 2	Cairngowau.....	46 27	54 14	Berg (same as No. 2855).
2891	do.	do.	46 28	53 12	Berg (same as No. 2875).
2892	do.	do.	46 44	52 50	Berg (same as No. 2815).
2893	do.	Warkworth.....	46 51	50 53	Berg (same as No. 2768).
2894	do.	Lismoria.....	46 17	54 15	Berg (same as No. 2890).
2895	do.	do.	46 28	53 14	Berg (same as No. 2891).
2896	do.	Prairie Mariner.....	46 26	52 22	Berg (same as No. 2873).
2897	do.	Montreal City.....	46 30	52 55	Berg and growler (same as No. 2862).
2898	do.	do.	46 30	53 10	Berg (same as No. 2878).
2899	do.	do.	46 45	52 43	Berg (same as No. 2895).
2900	do.	Warkworth.....	47 07	50 16	Berg (same as No. 2878).
2901	do.	do.	47 13	49 44	Berg (same as No. 2859).
2902	do.	do.	47 35	48 19	Berg (same as No. 2777).
2903	do.	do.	47 17	48 38	Berg (same as No. 2881).
2904	do.	Prairie Mariner.....	46 50	52 20	Growler.
2905	do.	Arosa Star.....	47 00	50 25	4 small growlers.
2906	do.	Empress of Scotland.....	46 26	54 14	Berg (same as No. 2900).
2907	do.	do.	46 35	53 46	Berg (same as No. 2854).
2908	do.	do.	46 47	52 21	Berg (same as No. 2842).
2909	do.	do.	46 48	52 16	Berg (same as No. 2876).
2910	do.	Montreal City.....	46 46	52 21	Berg (same as No. 2874).
2911	do.	Belos.....	45 00	46 25	Berg (same as No. 2908).
2912	do.	U. S. C. G. cutter Unimak.....	46 25	54 18	Berg (same as No. 2516).
2913	do.	Arosa Star.....	47 33	48 56	Berg (same as No. 2906).
2914	do.	Ardglen.....	46 20	54 15	Berg (same as No. 2880).
2915	do.	Arosa Star.....	47 28	48 07	Berg (same as No. 2912).
2916	do.	Linda.....	44 49	46 21	Berg (same as No. 2902).
2917	do.	U. S. C. G. cutter Unimak.....	46 28	53 16	Berg and 2 growlers (same as No. 2911).
2918	do.	do.	46 27	53 15	Berg (same as No. 2898).
2919	do.	Calanda.....	47 00	52 47	Growler.
2920	June 3	Empress of Australia.....	46 27	54 14	Berg (same as No. 2769).
2921	do.	do.	46 28	54 14	Berg (same as No. 2914).
2922	do.	Calanda.....	From east coast Newfoundland at 48°55' N. and east for 30 miles.		Berg (same as No. 2020).
2923	do.	Feechenheim.....	48 25	51 12	Close pack with numerous growlers and scattered bergs.
2924	do.	Beaverlodge.....	46 26	54 15	Berg.
2925	do.	do.	46 28	53 12	Berg (same as No. 2921).
2926	do.	do.	46 34	52 25	Berg (same as No. 2917).
2927	do.	do.	46 37	53 42	Berg (same as No. 2910).
2928	do.	do.	46 43	52 50	Berg (same as No. 2907).
2929	do.	do.	46 41	52 47	Berg (same as No. 2892).
2930	do.	Kurtarlit.....	45 57	47 46	Berg (same as No. 2899).
2931	do.	Unknown aircraft.....	49 10	51 18	Berg and several growlers (same as No. 2845).
2932	do.	Loria.....	50 14	54 39	Growler.
2933	do.	Cairndhu.....	47 00	52 31	Berg.
2934	do.	Beaverlodge.....	46 54	52 23	Berg (same as No. 2919).
2935	do.	Unknown aircraft.....	45 00	46 20	Berg and growler (same as No. 2909).
2936	do.	Egidia.....	47 20	50 57	Berg (same as No. 2916).
2937	June 4	Scythia.....	46 25	52 27	Berg (same as No. 2836).
2938	do.	do.	46 26	54 15	Berg (same as No. 2896).
2939	do.	do.	46 29	53 13	Berg (same as No. 2924).
2940	do.	do.	46 33	52 29	Berg (same as No. 2925).
2941	do.	do.	46 48	52 27	Berg (same as No. 2926).
2942	do.	Quebec.....	46 45	46 30	Berg (same as No. 2934).
					Medium berg (same as No. 2833).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
2943	June 4	Quebec	46 48	46 50	Small berg (same as No. 2834).
2944	do	U. S. S. Shakori	48 59	51 42	Several bergs, many growlers.
2945	do	Arthur Cross	46 39	52 52	Berg and growlers (same as No. 2929).
2946	do	do	46 42	52 54	Berg (same as No. 2928).
2947	June 5	Palma	46 15	53 40	Berg (same as No. 2897).
2948	do	do	46 26	53 17	Berg (same as No. 2939).
2949	do	do	46 30	53 00	Berg (same as No. 2945).
2950	do	Godafoss	46 36	52 52	Berg (same as No. 2946).
2951	do	do	46 43	52 39	Berg (same as No. 2951).
2952	do	do	46 43	52 58	Berg (same as No. 2933).
2953	do	do	46 52	52 43	Berg (same as No. 2882).
2954	do	Cierzo	45 12	48 46	Berg (same as No. 2837).
2955	do	Bassano	46 45	52 27	Berg (same as No. 2951).
2956	do	do	46 50	52 40	Berg (same as No. 2953).
2957	do	Cape Race Radio	46 44	52 58	Berg and 4 growlers (same as No. 2952).
2958	do	Adrina	47 31	51 44	Berg.
2959	do	U. S. S. Lindenwald	48 55	52 08	Growlers and brash.
			49 15	51 55	
			Within 70-mile radius of		
			63 30	55 00	
2960	June 6	USN aircraft			10 bergs.
2961	do	East Point Victory	51 38	54 34	Heavy concentration brash and block.
2962	do	Neptunia	44 53	48 48	
2963	do	Neckarstein	41 22	49 35	Berg (same as No. 2860).
2964	do	Vandalia	47 14	51 15	Berg (same as No. 2936).
2965	do	do	47 31	49 59	Berg (same as No. 2901).
2966	do	Unknown ship	39 54	48 18	Radar target possible berg.
2967	do	Sondresstrom AB	64 10	56 00	Berg.
2968	do	do	64 30	54 50	Do.
2969	do	do	65 00	55 40	Do.
2970	do	Concordia	47 21	50 19	Berg (same as No. 2905).
2971	do	Belray	47 00	48 05	Berg (same as No. 2915).
2972	do	Birte Hugo Stinnes	46 08	48 16	Berg (same as No. 2913).
2973	June 7	Geheimrat Sartori	46 49	52 27	Berg (same as No. 2955).
2974	do	do	46 51	52 36	2 growlers.
2975	do	Rialto	47 31	51 21	Growler.
2976	do	Beaverbrae	46 30	53 15	Berg (same as No. 2948).
2977	do	Vandalia	46 34	52 28	Berg (same as No. 2940).
2978	do	do	46 40	52 39	Berg (same as No. 2956).
2979	do	do	46 45	52 23	Berg (same as No. 2976).
2980	do	Beaverbrae	46 44	52 57	Berg (same as No. 2957).
2981	do	do	46 48	52 28	Berg (same as No. 2979).
2982	do	Vandalia	46 27	54 12	Berg (same as No. 2938).
2983	do	do	46 30	54 07	Berg (same as No. 2927).
2984	do	Vardulia	46 34	52 31	Berg (same as No. 2977).
2985	do	do	46 49	52 28	Berg (same as No. 2981).
2986	do	U. S. S. Lindenwald	46 20	54 15	Berg (same as No. 2998).
			57 00	59 45	Pack boundary.
			54 40	55 00	
			54 30	54 00	
			53 40	52 20	
			53 00	54 00	Many bergs and growlers.
			thence SSW.		
2988	do	do	BW-1 harbor and approaches.		
2989	June 8	Vardulia	46 24	54 15	Berg (same as No. 2986).
2990	do	Heidelberg	42 51	48 21	Growler.
2991	do	U. S. S. Utina	46 35	52 37	Berg (same as No. 2978).
2992	do	do	46 37	52 29	Berg (same as No. 2984).
2993	do	do	47 43	51 25	Berg.
2994	do	do	46 52	52 23	Berg (same as No. 2985).
2995	do	Manchester Shipper	46 36	53 45	Berg (same as No. 2949).
2996	do	do	46 37	52 36	Berg (same as No. 2952).
2997	do	do	46 52	52 26	Berg (same as No. 2994).
2998	do	Rathlin Head	46 37	52 35	Berg (same as No. 2996).
2999	do	do	46 51	52 25	Large berg and growler (same as No. 2997).
3000	do	Hydro	BW-1 harbor		Brash.
3001	do	do	BW-3 harbor		Do.
			53 05	54 30	Pack boundary.
			53 25	55 10	
			53 30	54 40	
			53 40	55 20	
			54 00	54 30	
			54 10	55 05	

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' /	° ' /	
3003	June 8.	USN aircraft	54 35	53 45	Pack boundary.
			54 55	55 45	
			54 25	55 40	
			54 25	56 05	
			54 50	56 15	
			55 15	54 00	
			62 00	64 00	
			61 30	64 00	
			61 25	61 30	
			60 30	61 00	
3004	do	do	60 50	60 30	Do.
			57 00	60 00	
			58 10	50 30	
			57 20	59 40	
			57 35	59 10	
			57 00	58 30	
3005	June 9	Empress of France	47 34	50 45	Berg and 2 growlers (same as No. 2970).
3006	do	Unknown ship	48 42	51 54	3 bergs.
3007	do	Empress of France	48 28	53 11	Berg and 2 growlers (same as No. 2976)
3008	do	do	46 45	52 58	Berg (same as No. 2980).
3009	do	do	46 30	53 21	Growler.
3010	do	U. S. N. S. Bluejacket	47 24	50 38	Berg (same as No. 3005).
3011	do	Empress of France	46 25	54 14	Berg (same as No. 2989).
3012	do	Grootebeer	46 26	54 14	Berg and 4 growlers (same as No. 3011).
3013	do	do	46 26	54 21	7 growlers.
3014	do	U. S. C. G. cutter Evergreen.	46 04	48 37	Berg (same as No. 2972).
3015	do	FS 209	48 10	52 40	Berg.
3016	do	Stegholm	44 02	48 38	Berg and several growlers (same as No. 2962).
3017	do	Enid Victory	48 30	52 16	Brash and growlers.
			48 42	52 16	
3018	do	U. S. S. Edisto	46 38	52 27	
3019	do	do	46 45	52 57	
3020	do	do	46 49	52 26	
3021	do	do	46 55	52 24	
3022	do	Vidal	40 43	49 30	
3023	do	Beaverburn	46 26	54 19	
3024	do	Enid Victory	48 57	52 02	
3025	do	FS 209	48 52	52 52	
3026	do	Woodford	47 25	50 57	Berg (same as No. 3010).
3027	do	Irmingard	47 27	51 48	Growler.
3028	do	FS 209	49 10	53 08	2 bergs.
3029	do	Adolph Gleue	46 28	52 35	2 bergs and several growlers (same as Nos. 2998, 3018).
3030	do	do	46 36	52 27	Berg (same as No. 3020).
3031	do	Beaverglen	46 35	54 19	Berg (same as No. 3023).
3032	do	U. S. S. Edisto	46 27	53 13	Berg (same as No. 3007).
3033	do	Adolph Gleue	46 29	53 11	Berg (same as No. 3032).
3034	do	Beaverburn	46 11	52 58	Berg (same as No. 2937).
3035	do	do	46 28	53 14	Berg (same as No. 3033).
3036	do	do	46 29	52 42	Berg (same as No. 3029).
3037	do	Irmingard	46 44	52 34	Berg (same as No. 3021).
3038	do	U. S. C. G. cutter Evergreen.	46 15	47 51	Berg (same as No. 2971).
3039	do	Hydro	60 30	46 00	Ice boundary.
			60 40	47 20	
			60 25	47 50	
			60 00	47 30	
			60 35	46 30	
3040	do	do	60 30	47 30	Belt of field ice 10 miles wide.
			60 10	47 20	
3041	June 10	Beaverglen	46 27	52 42	Berg (same as No. 3036).
3042	do	do	46 28	53 13	Berg (same as No. 3035).
3043	do	do	46 38	52 31	Berg (same as No. 3037).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
3044	June 10	Beaverlake.....	° ' 47 29	° ' 49 21	Berg (same as No. 2965).
3045	do	do.....	47 33	48 22	Berg.
3046	do	Atlantie.....	47 27	50 38	Berg (same as No. 2964).
3047	do	Franconia.....	47 25	51 00	Berg and several growlers (same as No. 3046).
3048	do	Atlantie.....	46 25	52 44	Berg (same as No. 3041).
3049	do	do.....	46 41	52 32	Berg (same as No. 3043).
3050	do	do.....	46 49	52 31	Berg and 4 growlers.
3051	do	Beaverlake.....	46 25	52 43	Berg (same as No. 3048).
3052	do	do.....	46 28	53 12	Berg (same as No. 3042).
3053	do	do.....	46 39	52 35	Berg (same as No. 3049).
3054	do	do.....	46 44	52 58	Berg (same as No. 3019).
3055	do	do.....	46 49	52 32	Berg (same as No. 3050).
3056	do	do.....	46 38	52 30	Growler.
3057	do	Atlantie.....	46 28	53 13	Berg (same as No. 3052).
3058	do	do.....	46 44	52 58	Berg (same as No. 3054).
3059	do	Beaverglen.....	46 38	52 31	Berg (same as No. 3053).
3060	do	do.....	47 24	49 11	Growler.
3061	do	Erholm.....	46 40	48 10	2 bergs and growlers.
3062	do	Atlantie.....	46 26	54 14	Berg (same as No. 3031).
3063	do	Montrose.....	47 32	49 18	Berg (same as No. 3044).
3064	do	Franconia.....	46 27	53 11	Berg (same as No. 3057).
3065	do	do.....	46 40	52 32	Berg (same as No. 3059).
3066	do	do.....	46 50	52 31	Berg and 7 growlers (same as No. 3055).
3067	do	Beaverglen.....	47 29	48 23	Berg (same as No. 3045).
3068	do	Franconia.....	46 15	53 21	Berg (same as No. 3034).
3069	do	do.....	46 26	54 14	Berg (same as No. 3062).
3070	do	Empress of Scotland.....	46 21	52 45	Berg (same as No. 3051).
3071	do	do.....	46 26	54 13	Berg (same as No. 3069).
3072	do	do.....	46 27	53 16	Berg (same as No. 3064).
3073	do	do.....	46 50	52 31	Berg (same as No. 3066).
3074	do	Ice Patrol plane.....	47 15	52 35	Berg.
3075	do	do.....	47 30	51 21	Berg (same as No. 2993).
3076	do	do.....	48 10	52 32	Berg.
3077	do	do.....	Bonavista Bay.....		5 bergs.
3078	do	do.....	49 10	53 03	Berg.
3079	do	do.....	49 15	53 11	Do.
3080	do	do.....	49 25	52 40	Do.
3081	do	do.....	49 32	53 20	Do.
3082	do	do.....	49 35	53 12	Do.
3083	do	do.....	Vicinity Fogo Is- land.		5 bergs.
3084	do	do.....	Hare Bay to Cape Bauld.		13 bergs.
3085	do	do.....	Strait of Belle Isle.. Bradore Bay Lab- rador along north shore of strait of Belle Isle to south point of Belle Isle then north from north point of Belle Isle to		102 bergs. Scattered field ice.
			52 15	55 12	
			to		
			52 15	54 15	
			to		
			53 05	54 00	
			thence north and northwest.		
3087	do	U. S. N. aircraft.....	51 30	56 30	18 bergs.
3088	do	do.....	Cape Normand and Cape Bauld.		Few bergs.
3089	do	do.....	St. Anthony har- bor.		Clear.
3090	do	do.....	Southern tip of Belle Isle west to Labrador coast.		Paek boundary.
3091	do	do.....	Strait of Belle Isle.		1/10 to 2/10 cover.
3092	do	Empress of Scotland.....	47 17	50 43	Berg.
3093	do	do.....	47 29	51 00	Berg (same as No. 3047).
3094	do	Stad Vlaardingen.....	48 09	52 39	Berg.
3095	do	Hydro.....	Simiutak to sea- ward to Cape Thorvaldsen.		Many bergy bits, growlers.
3096	do	do.....	BW-1 harbor.....		Scattered bergs and growlers.
3097	do	do.....	BW-3 harbor.....		Do.

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No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' ° '		
3098	June 10	Hydro-----	Saunders Island to Kap York to Byrants Island to Brownes Is- land to Holmes Island to Nugs- suak Island to 73 15 59 15 72 50 57 45 72 50 59 00 71 00 56 10 70 30 58 00 70 00 56 50 69 45 58 30 56 20 56 00		Pack boundary.
3099	do	do-----	55 30 | 55 30 54 30 | 54 30 to Belle Isle. White Bear Island 54 00 | 57 00 54 15 | 56 50 54 30 | 56 10 55 05 | 57 25 55 20 | 57 00 54 45 | 56 00 54 25 | 56 00 55 30 | 55 30 55 30 | 54 50 53 40 | 55 50 54 10 | 56 10 54 30 | 56 25 55 10 | 55 25		Do.
3100	do	do-----	54 45 | 53 45 54 20 | 53 40 54 10 | 54 25 53 50 | 54 10 53 40 | 55 00 thence S.E.		Southern pack boundary.
3101	do	do-----	46 25 | 54 13 46 45 | 46 44		Boundary detached pack.
3102	June 11	Beaverlake-----	46 32 | 53 29		Berg (same as No. 3071).
3103	do	U. S. C. G. cutter Ever- green.	46 42 | 52 39		Radar target possible berg.
3104	do	Montrose-----	46 30 | 53 27		Berg (same as No. 2995).
3105	do	Bristol City-----	46 40 | 52 40		2 growlers.
3106	do	Manchester Merchant.	46 54 | 52 34		Berg.
3107	do	do-----	46 20 | 53 04		Berg (same as No. 3065).
3108	do	do-----	46 26 | 53 40		Berg (same as No. 3073).
3109	do	Arosa Kolm-----	46 27 | 53 27		Berg (same as No. 3070).
3110	do	do-----	46 26 | 54 13		Berg (same as No. 3068).
3111	do	do-----	49 50 | 60 23		Berg (same as No. 3072).
3112	do	Bristol City-----	46 26 | 54 13		Berg (same as No. 3102).
3113	do	Prins Alexander-----	49 50 | 60 27		Berg.
3114	do	do-----	49 50 | 60 27		Do.
3115	do	do-----	49 52 | 60 06		Small berg.
3116	do	do-----	49 52 | 60 11		Do.
3117	do	do-----	49 54 | 59 55		Berg.
3118	do	do-----	49 56 | 59 43		Do.
3119	do	do-----	49 56 | 60 00		Do.
3120	do	do-----	50 01 | 61 41		Small berg.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
3121	June 11	Prins Alexander	50 02	60 36	Berg.
3122	do	do	50 02	60 32	Growler.
3123	do	do	50 02	60 36	Do.
3124	do	do	50 03	60 04	Do.
3125	do	do	50 03	60 20	Do.
3126	do	do	50 04	61 47	5 growlers.
3127	do	Ostefjord	46 27	53 36	Berg (same as No. 3106).
3128	do	do	46 30	53 40	Berg (same as No. 3110).
3129	do	U. S. N. S. Sagitta	46 26	53 36	Berg (same as No. 3127).
3130	do	do	46 29	53 47	Berg (same as No. 3128).
3131	do	U. S. N. S. Vela	46 27	54 16	Berg (same as No. 3112).
3132	do	Hydro	Cape Bauld to Belle Isle to Martin Tickle	51 40 59 00 to 52 30 54 30	Southern pack boundary.
3133	June 12	U. S. N. S. Vela	46 29	53 44	Berg (same as No. 3130).
3134	do	Ramore Head	46 23	54 14	Berg (same as No. 3131).
3135	do	do	46 28	53 43	Berg (same as No. 3129).
3136	do	do	46 28	53 52	Berg (same as No. 3133).
3137	do	do	46 36	52 52	Berg (same as No. 3107).
3138	do	U. S. C. G. Cutter Evergreen.	46 27	53 46	Berg (same as No. 3135).
3139	do	do	46 32	53 54	Berg (same as No. 3136).
3140	do	Arthur Cross	46 26	53 44	Berg (same as No. 3138).
3141	do	do	46 30	53 53	Berg (same as No. 3139).
3142	do	do	46 42	52 54	Berg (same as No. 3058).
3143	do	Begonia	46 11	53 50	Berg.
3144	June 13	U. S. N. S. LST 287	46 29	54 20	Berg (same as No. 3134).
3145	do	U. S. C. G. Cutter Spencer.	43 03	48 14	Radar target possible berg.
3146	do	do	43 06	49 07	Do.
3147	do	Esther Schulte	46 23	53 16	Berg (same as No. 3109).
3148	do	do	46 20	53 23	Growler.
3149	do	Unknown ship	48 17	52 46	Berg.
3150	do	Esther Schulte	46 15	54 00	Berg (same as No. 3143).
3151	do	do	46 24	54 13	Berg (same as No. 3144).
3152	do	do	46 36	52 54	Berg (same as No. 3137).
3153	do	do	46 38	52 51	Berg (same as No. 3142).
3154	do	U. S. N. S. Kelley	46 10	54 01	Berg (same as No. 3150).
3155	do	do	46 21	53 20	Berg (same as No. 3147).
3156	do	do	46 35	52 50	Berg (same as No. 3153).
3157	do	do	46 38	53 03	Berg (same as No. 3152).
3158	do	do	46 39	52 55	Berg (same as No. 3108).
3159	do	do	46 21	53 20	Growler.
3160	do	Cortona	46 07	53 48	Berg (same as No. 3154).
3161	do	do	46 25	54 10	Berg (same as No. 3151).
3162	do	do	46 29	53 44	Berg (same as No. 3140).
			53 00	55 00	
3163	do	Hydro	56 00 to 57 00 to 61 00	55 00 to 58 30 to 62 00	Pack boundary.
3164	June 14	Unknown ship	49 16	52 48	Berg.
3165	do	do	49 18	52 45	Do.
3166	do	Cortona	46 18	53 11	Berg (same as No. 3155).
3167	do	Oakby	46 11	53 50	Berg (same as No. 3160).
3168	do	do	46 19	53 12	Berg (same as No. 3166).
3169	do	Ice Patrol plane	46 22	52 56	Berg (same as No. 3168).
3170	do	do	46 29	53 25	Berg (same as No. 3162).
3171	do	do	46 37	52 55	Berg (same as No. 3156).
3172	do	do	46 42	52 59	Berg (same as No. 3158).
3173	do	do	47 04	51 04	Berg (same as No. 3092).
3174	do	do	46 34	53 35	Growler.
3175	do	do	46 35	52 51	Do.
3176	do	do	46 40	53 02	Do.
3177	do	Danaholm	46 10	53 50	Berg (same as No. 3167).
3178	do	Cairngowan	46 26	54 13	Berg (same as No. 3161).
3179	do	do	46 32	53 44	Berg (same as No. 3141).
3180	do	do	46 35	52 58	Berg (same as No. 3171).
3181	do	Parthia	47 00	48 31	Berg (same as No. 3063).
3182	do	Grootebeer	46 27	54 14	Berg (same as No. 3178).
3183	do	Glaidsdale	46 15	49 11	Growler.
3184	do	Lyngsfjord	46 17	53 44	Berg (same as No. 3177).
3185	do	Grootebeer	46 18	53 41	Berg (same as No. 3184).
3186	do	do	46 30	53 47	Berg (same as No. 3179).
3187	do	do	46 36	52 50	Berg (same as No. 3180).
3188	do	do	46 40	52 53	Berg (same as No. 3172).
3189	do	do	46 32	52 59	Growler.
3190	do	Atlantic	46 16	54 13	Berg (same as No. 3182).
3191	do	Parthia	47 05	47 36	Berg (same as No. 3067).
3192	do	Ice Patrol plane	43 17	48 08	Growler.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North	West	Description
			latitude	longitude	
3193	June 14	U. S. N. plane	56 15	61 00	Pack boundary.
			56 22	60 59	
			56 41	60 56	
			56 53	60 54	
3194	do	Hydro	57 09	61 21	Do.
			56 45	58 30	
			56 05	57 40	
			Farmyard Island to Turnavik Island to Iron-bound Island to Ragged Island to		
3195	do	do	54 55	58 10	Do.
			54 45	58 30	
			60 55	48 50	
			59 45	47 30	
3196	do	do	59 45	47 00	Do.
			59 30	46 00	
			59 25	43 20	
			46 46	52 55	
3197	June 15	Atlantic	46 46	52 55	Berg (same as No. 3188).
3198	do	Irvingdale	46 24	54 03	Berg (same as No. 3190).
3199	do	Atlantic	46 40	52 55	Berg (same as No. 3187).
3200	do	U. S. N. S. Johnson	46 40	52 55	Berg (same as No. 3199).
3201	do	do	47 49	49 30	Radar target possible berg.
3202	do	Fort Hoskins	47 59	52 42	Berg.
3203	do	Irish Oak	46 13	53 19	Berg and growler (same as No. 3169).
3204	do	USAF aircraft	58 57	48 00	Berg.
3205	do	Waterman	46 10	53 10	2 growlers.
3206	do	U. S. C. G. Cutter Mendota	46 26	54 13	Berg (same as No. 3198).
3207	do	Waterman	46 12	53 43	Berg (same as No. 3185).
3208	do	Olga	43 57	48 39	Berg (same as No. 3016).
3209	do	U. S. N. S. Kelley	46 40	52 54	Berg (same as No. 3200).
3210	do	Dunelmia	46 26	53 25	Berg (same as No. 3170).
3211	do	Saggat	47 49	52 46	Berg (same as No. 3202).
3212	June 16	U. S. C. G. Cutter Mendota	48 09	51 10	Berg.
3213	do	do	48 13	50 50	Do.
3214	do	Saggat	48 20	51 40	Do.
3215	do	Stad Rotterdam	48 15	50 55	Do.
3216	do	Resurgent	46 53	51 31	Berg (same as No. 3173).
3217	do	Irish Pine	46 49	51 44	Berg (same as No. 3216).
3218	do	Ice Patrol plane	46 30	47 10	Berg.
3219	do	do	47 15	51 05	Berg (same as No. 3093).
3220	do	do	47 49	52 47	Berg (same as No. 3211).
3221	do	do	47 50	52 43	Berg.
3222	do	do	47 56	51 42	Do.
3223	do	do	48 01	51 18	Do.
3224	do	do	48 09	51 33	Do.
3225	do	do	48 33	52 23	Do.
3226	do	do	48 40	52 39	Do.
3227	do	do	47 51	52 23	Growler.
3228	do	do	47 58	51 49	Do.
3229	do	Hydro	54 35	55 00	Pack boundary.
			54 30	54 15	
			54 15	53 35	
			54 20	53 30	
			53 55	53 35	
			54 04	53 40	
			53 30	54 30	
			53 05	55 30	
			52 50	55 30	
			52 45	53 38	
			52 20	52 35	
			52 32	52 40	

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
3230	June 17	Irish Pine	46 40	52 55	Berg (same as No. 3209).
3231	do	do	46 46	52 53	Berg (same as No. 3197).
3232	do	River Afton	48 05	51 27	Berg.
3233	do	do	48 07	51 13	Do.
3234	do	do	48 01	51 41	4 growlers.
3235	do	Irish Pine	46 25	54 12	Berg and 2 growlers (same as No. 3206).
3236	do	Samaria	46 48	51 33	Berg (same as No. 3217).
3237	do	U. S. C. G. cutter Absecon	46 40	52 56	Berg and many growlers (same as No. 3230).
3238	do	Ice Patrol plane	46 40	52 54	Berg (same as No. 3237).
3239	do	do	47 41	51 53	Berg.
3240	do	do	46 46	52 55	Berg and many growlers (same as No. 3231).
3241	do	do	47 47	52 44	Berg (same as No. 3221).
3242	do	do	47 52	52 46	Berg (same as No. 3220).
3243	do	do	47 57	51 31	Berg (same as No. 3222).
3244	do	do	48 02	51 00	Berg.
3245	do	do	48 11	51 32	Do.
3246	do	do	48 13	51 22	Do.
3247	do	do	48 27	52 22	Do.
3248	do	do	48 29	52 49	Do.
3249	do	do	48 32	52 28	Do.
3250	do	do	48 37	52 47	Do.
3251	do	do	48 39	52 26	Do.
3252	do	do	Bonavista Bay		9 bergs.
3253	do	do	Fogo Island to Cape Freels.		4 bergs.
3254	do	do	47 25	52 29	Growler.
3255	June 18	Kollbryn	46 25	48 13	Berg (same as No. 3181).
3256	do	Mormaewave	42 53	48 17	Growler.
3257	do	Unknown aircraft	45 15	47 05	Berg (same as No. 2930).
3258	do	Durham Trader	48 14	51 38	Berg.
3259	do	do	48 08	51 45	Several growlers.
3260	do	River Afton	47 52	51 56	Berg (same as No. 3243).
3261	do	do	48 06	51 47	Berg.
3262	do	do	48 12	51 47	Do.
3263	do	Sunland	45 37	48 10	Growler.
3264	do	City of Manchester	46 20	48 10	Berg (same as No. 3255).
3265	do	Transatlantic	45 56	53 58	Berg (same as No. 3203).
3266	do	do	46 02	54 12	Berg (same as No. 3207).
3267	June 19	Elysia	46 37	52 51	Berg (same as No. 3238).
3268	do	do	46 41	52 53	Berg (same as No. 3240).
3269	do	Herta Engeline Fritzen	46 36	52 52	Berg (same as No. 3267).
3270	do	do	46 39	52 54	Berg (same as No. 3268).
3271	do	Monson	46 54	51 38	Berg (same as No. 3236).
3272	do	Ice Patrol plane	45 56	46 30	Berg (same as No. 2935).
3273	do	do	43 49	48 55	3 small growlers.
3274	June 20	Franeonia	47 44	49 48	Radar target possible berg.
3275	do	Manchester Explorer	46 23	53 39	Berg (same as No. 3210).
3276	June 21	USAF aircraft	48 20	52 25	Berg.
3277	do	do	48 43	51 20	Do.
3278	do	TWA aircraft	49 00	51 30	4 small bergs.
3279	do	do	49 10	53 00	2 large bergs.
3280	do	Vardulia	46 24	54 21	2 bergs (same as Nos. 3186, 3235).
3281	do	Swainby	46 37	52 45	Berg (same as No. 3269).
3282	do	do	46 39	52 37	Berg (same as No. 3270).
3283	do	do	47 02	52 23	Growler.
3284	do	Manchester Explorer	46 38	52 50	Berg (same as No. 3281).
3285	do	do	46 43	52 46	Berg (same as No. 3282).
3286	do	Arosa Star	46 40	52 49	Berg (same as No. 3284).
3287	do	do	46 42	52 43	Berg (same as No. 3285).
3288	do	Tasco	45 44	54 04	Berg (same as No. 3265).
3289	do	U. S. C. G. cutter Evergreen	46 35	52 48	Berg (same as No. 3286).
3290	do	do	46 37	52 42	Berg (same as No. 3287).
3291	do	Sandsend	46 55	51 37	Berg (same as No. 3271).
3292	June 22	Unknown aircraft	49 13	53 09	Berg.
3293	do	Ice Patrol plane	42 59	48 46	Small berg (same as No. 3208).
3294	do	do	43 59	48 55	Small berg (same as No. 3061).
3295	do	do	43 25	48 18	Growler.
3296	June 23	Aseania	52 34	51 43	Berg.
3297	do	do	52 35	51 36	Do.
3298	do	do	52 36	51 46	Growler.
3299	do	Arkansas	43 34	48 38	Do.
3300	do	Aseania	52 11	54 00	Berg.
3301	do	do	52 19	53 51	Do.
3302	do	do	52 44	51 10	Numerous small growlers.
3303	do	Oakby	48 55	52 43	Berg.
3304	do	Storfjeld	49 08	53 06	Do.
3305	do	do	49 11	53 09	Do.
3306	do	U. S. C. G. cutter Androscoggin	46 33	54 23	2 bergs and numerous growlers (same as No. 3280).
3307	do	Wychwood	46 30	53 00	Berg (same as No. 3289).

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North	West	Description
			latitude	longitude	
			° /	° /	
3308	June 23	U. S. N. S. Mascoma	Straight of Belle Isle		42 bergs scattered in strait.
3309	do	Storfeld	48 49	52 58	Berg.
3310	do	do	48 51	52 56	Do.
3311	do	U. S. C. G. cutter Evergreen.	48 42	52 50	Growler.
312	do	Empress of Scotland	52 54 to 53 07	51 45 to 50 53	Widely scattered ice with several bergs and growlers.
			thence SS E.		
3313	do	Storfeld	47 50	52 37	Berg (same as No. 3212).
3314	do	Hydro	49 30	53 30	15 bergs.
3315	do	U. S. N. S. Nodaway	51 50	55 34	Radar target possible berg.
3316	do	do	51 51	55 43	Do.
3317	do	do	51 54	55 30	Do.
3318	do	do	51 58	55 30	Do.
3319	do	do	51 58	55 43	Do.
3320	do	do	51 59	55 44	Do.
3321	do	do	52 01	55 39	Do.
3322	do	do	52 02	55 35	Do.
3323	do	do	52 03	55 32	Do.
3324	do	do	52 06	55 35	2 bergs.
3325	do	do	52 07	55 25	Berg.
3326	June 24	do	52 09	55 29	Do.
3327	do	do	52 10	55 32	Do.
3328	do	do	52 10	55 35	Do.
3329	do	do	52 13	55 24	Growlers.
3330	June 25	U. S. C. G. cutter Evergreen.	48 02	49 46	Radar target possible berg.
3331	do	U. S. N. S. Nodaway	51 00	57 00	Berg.
3332	do	do	51 28	56 29	Do.
3333	do	U. S. S. Alsea	52 25	51 14	Berg and growler.
3334	do	Samaria	51 12	57 01	Berg.
3335	do	Gunvor Maersk	47 23	51 30	Berg (same as No. 3219).
3336	do	Amerian Harvester	43 05	49 15	Radar target possible berg.
3337	do	Samaria	Straight of Belle Isle		Numerous bergs.
3338	June 27	Nova Scotia	46 15	54 25	Radar target possible berg.
3339	do	Birte Hugo Stinnes	53 13	51 42	Berg and growlers.
3340	do	Carl Gorthon	46 25	54 36	Berg (same as No. 3306).
3341	June 28	Cleopatra	46 29	54 34	Berg (same as No. 3340).
3342	do	do	46 32	54 12	Berg (same as No. 3306).
3343	do	Poseidon	46 33	52 53	Berg (same as No. 3290).
3344	do	Caslon	46 31	54 30	Berg (same as No. 3341).
3345	do	Wurtemberg	48 06	50 43	Radar target possible berg.
3346	June 29	U. S. C. G. cutter Androscoggin.	46 31	55 13	Do.
3347	do	Beaverbrae	52 33	51 11	Berg and growlers.
3348	do	Svaneffell	Amour Point to Four Mile Cove.		Numerous bergs and growlers.
3349	do	Beaverbrae	52 30	51 34	Growler.
3350	do	M. B. McLean	51 30	56 30	Berg.
3351	do	do	51 30	56 38	Do.
3352	do	do	51 31	56 41	Do.
3353	do	do	51 34	56 21	Do.
3354	do	do	51 35	56 22	Do.
3355	do	do	51 36	56 24	Do.
3356	do	do	51 37	56 21	Do.
3357	June 30	Beaverbrae	51 50	55 13	Do.
3358	do	Marengo	48 26	49 05	Do.
3359	do	Monica Smith	48 48	49 17	Berg and growlers.
3360	July 1	President Pierce	43 07	49 22	Radar target possible berg.
3361	do	U. S. S. Alsea	52 04	50 38	Berg.
3362	do	do	52 05	50 43	Radar target possible berg.
3363	do	do	52 12	50 40	Berg.
3364	do	do	52 16	50 44	Radar target possible berg.
3365	July 2	Bristol City	52 31	50 51	Growler.
3366	do	Ice Patrol plane	42 49	48 54	Berg and growler (same as No. 3293).
3367	do	do	43 08	49 28	Radar target possible berg.
3368	do	do	44 00	48 20	Do.
3369	do	do	48 01	48 02	Berg.
3370	do	Stad Vlaardingen	47 58	52 42	Large berg.
3371	July 3	Unknown aircraft	50 00	52 25	Berg.
3372	do	U. S. C. G. cutter Eastwind.	52 40	51 04	Large berg.
3373	do	Hydro	BW-1 harbor		Bergs and growlers.
3374	do	do	BW-3 harbor		Do.
3375	July 4	U. S. N. S. Kelley	46 33	52 53	Radar target possible berg.
3376	do	Adolph Gleue	49 41	55 10	Berg.
3377	do	do	49 49	55 19	Do.
3378	do	do	49 50	55 18	Do.
3379	do	do	49 51	55 23	Do.
3380	do	do	50 51	55 22	Do.
3381	do	do	50 54	55 16	Do.
3382	do	do	51 00	55 19	Do.
3383	do	Unknown aircraft	47 50	53 05	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude		West longitude		Description
			°	'	°	'	
3384	July 5	Nieuw Amsterdam	42	38	48	00	12 small radar targets possible growlers.
3385	..do..	U. S. C. G. cutter Mendota.	46	33	52	54	Berg (same as No. 3343).
3386	..do..	..do..	46	37	54	07	Berg and growler (same as No. 3342).
3387	..do..	Adriana	51	27	50	03	Berg and growler.
3388	..do..	Johan Van Oldenbarnevelt.	42	18	49	22	Berg and growler (same as No. 3294).
3389	..do..	Stad Vlaardingen	47	55	52	57	Berg (same as No. 3383).
3390	..do..	..do..	47	58	52	41	Berg (same as No. 3370).
3391	..do..	Neptunia	46	34	52	53	Berg (same as No. 3385).
3392	..do..	CTG 6.3	54	08	52	49	Berg and growlers.
3393	..do..	Ice Patrol plane	47	56	53	00	Berg (same as No. 3388).
3394	..do..	..do..	48	03	52	27	Berg.
3395	..do..	..do..	48	08	52	31	Do.
3396	..do..	..do..	48	13	53	12	Do.
3397	..do..	..do..	48	29	48	00	Do.
3398	..do..	..do..	48	47	52	43	Do.
3399	..do..	..do..	48	53	53	17	Do.
3400	..do..	..do..	48	57	53	29	Do.
3401	..do..	..do..	48	58	53	36	Do.
3402	..do..	..do..	49	07	53	21	Do.
3403	..do..	..do..	49	08	53	22	Do.
3404	..do..	..do..	49	10	48	44	Do.
3405	..do..	..do..	49	13	53	13	Do.
3406	..do..	..do..	49	31	52	38	Do.
3407	..do..	..do..	49	35	53	40	Do.
3408	..do..	..do..	ENE. 10 miles off Fogo Island.				3 bergs.
3409	..do..	..do..	49	50	53	10	Berg.
3410	..do..	..do..	49	52	53	12	Do.
3411	..do..	..do..	49	59	53	41	Do.
3412	..do..	..do..	50	05	52	30	Do.
3413	..do..	..do..	50	13	52	49	Do.
3414	..do..	..do..	51	12	54	19	Do.
3415	..do..	..do..	51	20	55	08	Do.
3416	..do..	..do..	51	30	53	55	Do.
3417	..do..	..do..	51	33	54	01	Do.
3418	..do..	..do..	51	42	54	04	Do.
3419	..do..	..do..	51	50	50	02	Do.
3420	..do..	..do..	Within 22-mile radius of Belle Isle.				67 bergs.
3421	..do..	..do..	52	05	54	36	Berg.
3422	..do..	..do..	52	07	54	31	Do.
3423	..do..	..do..	52	08	50	07	Do.
3424	..do..	..do..	52	31	55	07	4 bergs.
3425	..do..	..do..	Offshore near Cape St. Francis.				17 bergs.
3426	..do..	..do..	Offshore near Hawks Island.				8 bergs.
3427	..do..	..do..	52	42	54	47	Berg.
3428	..do..	..do..	52	54	54	58	Do.
3429	..do..	..do..	52	55	53	10	Do.
3430	..do..	..do..	52	58	55	05	Do.
3431	..do..	..do..	53	08	51	52	Do.
3432	..do..	..do..	53	18	54	35	5 bergs.
3433	..do..	..do..	53	32	54	00	Berg.
3434	..do..	..do..	53	37	54	15	Do.
3435	..do..	..do..	49	34	50	53	Growler.
3436	..do..	..do..	53	10	53	10	Radar target, possible berg.
3437	..do..	..do..	53	14	53	35	3 radar targets, possible bergs.
3438	..do..	..do..	53	20	53	50	Do.
3439	July 6	American Judge	42	15	49	20	2 bergs and growler.
3440	..do..	Unknown aircraft	51	50	50	00	Bergs.
3441	..do..	Fairtky	51	22	49	29	Do.
3442	..do..	U. S. C. G. cutter Barataria.	46	38	54	05	Berg (same as No. 3386).
3443	..do..	Ice Patrol plane	Cape Freels to Funk Island to Fogo Island to Cape Freels.				16 bergs.
3444	..do..	..do..	Notre Dame Bay.				7 bergs.
3445	..do..	..do..	Vicinity Gray Island.				14 bergs.
3446	..do..	..do..	50	36	54	42	Berg.
3447	..do..	..do..	50	48	54	30	Do.
3448	..do..	..do..	51	03	54	06	Do.
3449	..do..	..do..	51	04	54	47	Do.
3450	..do..	..do..	Hare Bay entrance.				3 bergs.
3451	..do..	..do..	51	31	54	46	Berg.
3452	..do..	..do..	Near Cape Bauld.				12 bergs.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
3453	July 6	Ice Patrol plane	51 44	54 53	Berg.
3454	do	do	51 45	54 49	Do.
3455	do	do	51 46	54 53	Do.
3456	do	do	51 48	54 55	Do.
3457	do	do	51 48	55 06	Do.
3458	do	do	Close inshore Belle Isle.		6 bergs.
3459	do	do	Belle Isle to Labrador coast.		28 bergs.
3460	do	do	Strait of Belle Isle.		11 bergs.
3461	do	do	51 22	57 02	Berg.
3462	do	do	51 26	57 12	Do.
3463	do	do	Amour Point to Cape Bauld.		13 growlers.
3464	July 7	Adolph Gleue	49 38	55 01	Berg.
3465	do	do	49 42	54 46	Do.
3466	do	do	49 44	54 32	Do.
3467	do	do	49 44	54 33	Do.
3468	do	do	49 44	54 43	Do.
3469	do	do	49 45	54 33	Do.
3470	do	do	49 45	54 36	Do.
3471	do	do	49 47	55 02	Do.
3472	do	do	49 45	54 42	Berg and growler.
3473	do	do	49 46	54 40	Do.
3474	do	do	49 46	54 41	Growler.
3475	do	do	49 46	54 44	3 growlers.
3476	do	U. S. N. S. Sgt Jonah E. Kelley.	46 46	54 09	Berg and 16 growlers (same as No. 3342).
3477	July 8	U. S. C. G. cutter Barataria.	52 27	51 17	Berg.
3478	do	Niantie Victory	46 34	52 55	Berg (same as No. 3391).
3479	do	Ice Patrol plane	46 10	54 45	Growler.
			58 15	60 30	
			58 35	to 60 35	
			58 50	to 60 10	
3480	July 9	Goose Bay AB.	59 10	to 60 15	Pack boundary.
			59 05	to 60 35	
			59 30	to 60 15	
			58 20	to NW. 62 00	
			58 17	to 61 15	
			58 50	to 60 45	
3481	July 9	Goose Bay AB.	58 50	to 61 30	Do.
			61 00	to 61 45	
			61 10	to 61 25	
3482	July 10	TWA plane	49 22	52 16	Berg.
3483	do	U. S. C. G. cutter Absecon.	50 19	52 26	3 bergs.
3484	do	do	Immediate vicinity Cape St. Mary.		3 growlers.
3485	do	do	46 35	52 53	Berg (same as No. 3478).
3486	July 11	Irish Oak	46 34	52 46	Berg and growler (same as No. 3485).
3487	do	Waterman	46 34	52 52	Berg (same as No. 3486).
3488	do	Beaverglen	52 41	51 50	Berg.
3489	do	do	52 11	55 12	Do.
3490	do	Niantie Victory	49 18	52 36	Berg and growlers.
3491	do	do	49 20	52 30	Do.
3492	July 12	Beaverbrae	51 40	55 52	2 bergs.
3493	do	do	51 43	55 27	3 bergs.
3494	do	do	51 44	55 13	Berg.
3495	do	do	52 26	51 00	Berg and 2 growlers.
3496	do	Ice Patrol plane	48 05	52 55	Berg.
3497	do	do	48 55	53 03	Berg and growler.
3498	do	do	48 56	53 15	Berg and 4 growlers.
3499	do	do	49 10	51 36	Berg.
3500	do	do	49 15	53 05	2 bergs.
3501	do	do	49 17	52 43	Berg.
3502	do	do	49 22	53 20	Do.
3503	do	do	49 24	52 39	Do.
3504	do	do	49 38	53 54	Do.
3505	do	do	50 40	52 44	Do.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
3506	July 12.	Ice Patrol Plane	51 12	54 05	Berg.
3507	do	do	51 20	49 21	Do.
3508	do	do	51 26	54 36	Do.
3509	do	do	51 32	54 35	Do.
3510	do	do	51 37	49 42	Do.
3511	do	do	51 38	54 38	2 bergs.
3512	do	do	51 41	50 29	Berg and growler.
3513	do	do	51 42	54 42	Berg.
3514	do	do	51 51	55 06	Do.
3515	do	do	52 20	50 55	Do.
3516	do	do	52 30	50 50	Do.
3517	do	do	52 34	51 54	Berg and growler.
3518	do	do	52 35	52 13	Berg.
3519	do	do	52 53	53 10	Do.
3520	do	do	53 00	52 34	Do.
3521	do	do	53 06	52 03	6 bergs and growler.
3522	do	do	53 08	52 35	2 bergs and 1 growler.
3523	do	do	53 10	52 26	Berg and growler.
3524	do	do	53 16	52 22	Berg.
3525	do	do	51 14	54 10	Growler.
3526	do	do	52 54	52 46	Do.
3527	do	do	52 56	52 30	2 growlers.
3528	do	Hans Maersk	50 16	53 15	2 bergs.
3529	July 13	Ice Patrol plane	46 32	52 53	Growler.
3530	do	do	46 49	54 12	2 growlers.
3531	July 15	Beaverford	52 32	50 32	Berg.
3532	do	do	52 28	50 39	Do.
3533	July 16	Hydro	49 04	52 25	Do.
3534	July 18	do	49 45	50 42	Do.
3535	July 18	do	49 19	52 35	Do.
3536	do	do	49 22	54 40	Do.
3537	do	do	49 25	52 35	Do.
3538	do	do	49 45	52 00	Do.
3539	July 22	do	49 24	53 30	Do.
3540	do	do	Straits of Belle Isle		Several bergs.
3541	do	do	52 00	50 54	Berg.
3542	do	do	52 18	50 54	Do.
3543	do	do	52 48	50 48	Do.
3544	do	do	53 00	51 00	Do.
3545	July 24	do	50 15	48 15	Do.
3546	do	do	52 42	53 10	3 bergs.
3547	July 26	USCG plane	{ Within 12 miles of }		{ Do.
3548	do	Hydro	49 11	52 29	Berg.
3549	do	do	49 58	50 58	Do.
3550	do	do	49 48	51 08	Do.
3551	do	do	51 51	50 56	Do.
3552	do	do	51 06	51 00	Do.
3553	do	do	52 08	51 12	Do.
3554	do	do	52 18	51 22	Do.
3555	do	do	52 17	51 33	Do.
3556	do	do	52 20	51 05	Do.
3557	do	do	52 16	51 04	Do.
3558	July 28	do	50 05	41 30	Do.
3559	July 29	U. S. C. G. Cutter Ing- ham.	51 44	51 11	Do.
3560	do	do	51 58	51 33	Do.
3561	do	do	52 14	51 25	Do.
3562	Aug. 2	Bahia Thetis	52 25	51 56	Do.
3563	Aug. 4	Hydro	51 16	51 10	Do.
3564	do	USCG plane	48 11	52 33	Do.
3565	do	do	48 13	52 45	Do.
3566	do	do	48 22	52 32	Growler.
3567	do	do	50 09	51 41	Do.
3568	do	do	50 36	50 33	Do.
3569	do	do	51 04	51 50	Do.
3570	do	do	51 41	52 16	Do.
3571	do	do	51 57	51 35	Do.
3572	Aug. 11	do	51 20	50 05	Medium berg.
3573	do	do	49 41	50 37	Growler.
3574	do	do	51 50	51 48	Radar target, possible berg.
3575	Aug. 16	Quebec	52 36	55 12	Large berg.
3576	Aug. 25	U. S. C. G. Cutter Ever- green.	53 37	55 30	2 large bergs.
3577	Aug. 27	USCG plane	{ Within 20-mile radius of }		{ 4 medium bergs.
3578	Aug. 29	U. S. C. G. Cutter Ever- green.	52 50	54 30	Large berg.
			59 18	44 53	
3579	do	do	59 21	45 09	Do.
3580	Aug. 31	Ravenshoe	58 23	43 22	Berg, 160 feet high, 705 feet long.

TABLE OF ICE REPORTS, 1954—Continued

No.	Date	Name of vessel	North latitude		West longitude		Description
			°	'	°	'	
3581	Sept. 3	Hydro.....	50	06	53	32	Berg.
3582	Sept. 4	do.....	50	00	53	00	Do.
3583	do.....	U. S. C. G. Cutter Evergreen.	59	17	43	07	Do.
3584	do.....	do.....	59	20	43	52	Do.
3585	do.....	do.....	59	29	43	36	Do.
3586	Sept. 5	Hydro.....	50	00	52	45	Do.
3587	Sept. 6	do.....	59	20	44	32	2 large bergs.
3588	Sept. 7	USCG plane.	49	45	52	32	Growler.
3589	do.....	do.....	53	25	53	07	Do.
3590	Sept. 17	do.....	52	57	52	58	Small berg.
3591	Dec. 1	Foldenford.....	56	38	42	42	Large berg.
3592	Dec. 3	Hydro.....	51	28	51	38	Berg.
3593	Dec. 8	Straum.....	55	56	41	47	Berg, 110 feet high and growlers.
3594	do.....	Tel Aviv.....	55	38	39	10	Berg.

PHYSICAL OCEANOGRAPHY OF THE GRAND BANKS REGION AND THE LABRADOR SEA IN 1954¹

By Floyd M. Soule and J. E. Murray, U. S. Coast Guard

The U. S. C. G. Cutter *Evergreen* again served as oceanographic vessel of the ice patrol in 1954. There were no major ship changes affecting the oceanographic work. Earlier bulletins of this series contain descriptions of deck and laboratory equipment for carrying out the mission of ice patrol oceanography.

The work of dynamic topographic surveying for the 1954 ice patrol season began with the departure of the *Evergreen* from Argentia on the afternoon of 30 March. Because of the large number of early season bergs which had been in the vicinity of Flemish Cap, it was desirable to have some information as to the current pattern off the northeastern shoulder of the Grand Banks and north of Flemish Cap. To include this area in the first survey it was necessary to omit the area south of the Tail of the Grand Banks. The southern limit of the surveyed area therefore was fixed at about 42° N. The work of collection of data began at the southern end of the survey on the morning of 1 April and progressed northward. The weather was more boisterous than usual and the succession of gales was more like what might be expected in March than April. The work of collection of data was interrupted by weather for 4 hours on the 2d, 20 hours on the 4th, and 18 hours on the 7th and 8th. At the next to the last station three of the Nansen water bottles had to be taken to the laboratory to thaw out before the samples could be withdrawn. Similar conditions existed at the final station, but additional personnel were assigned to speed up the work of withdrawing the water samples from the Nansen bottles as they arrived on deck before they had time to freeze. The work of collection of data was completed on the morning of 15 April, 93 stations having been occupied. A course was then laid for Argentia where the *Evergreen* arrived on the afternoon of 16 April.

On the afternoon of 25 April, the *Evergreen* departed St. John's, Newfoundland, for the purpose of making a second current survey, this time of the waters over and immediately seaward of the eastern and southern slopes of the Grand Banks from the latitude of Flemish Cap southward and extending just westward of the Tail of the Banks.

¹ To be reprinted as Contribution No. 758 in the Collected Reprints of the Woods Hole Oceanographic Institution.

The work of collection of data began on the morning of 26 April and progressed from north toward south. The first section had not been completed when it was necessary to heave to on account of weather at midnight on the first day. After 15½ hours, oceanographic work was resumed. No other major interruptions occurred and the collection of data was completed on the afternoon of 8 May. This survey was made up of 83 stations. The *Evergreen* then proceeded to a point about 100 miles southeasterly of the Tail of the Banks, where a carboy of surface water was collected for use as a substandard of salinity during subsequent surveys. A course was then laid for Argentia where the *Evergreen* arrived on the morning of 10 May.

The *Evergreen* departed Argentia on the morning of 28 May to begin a third survey. The planned survey had the same northern limit as the second survey but had a western boundary of 50°15' W., and extended farther seaward than usual in the hope of developing information as to the extent of the colder mixed-water salients which were known to exist south-southeastward of the Tail of the Banks and southward of Flemish Cap. The work of collection of data began at noon on 29 May and work progressed from south towards north. On 6 June the survey work was interrupted to intercept the U. S. C. G. Cutter *Matagorda* to effect the emergency transfer of two men for transportation to Boston. Work on the survey was resumed on the early morning of 7 June. It was not necessary to heave to on account of gales during this survey. No further interruptions occurred, and the work of collection was completed on the afternoon of 11 June, the survey including 90 stations. The *Evergreen* then proceeded to Argentia, arriving there on the afternoon of 12 June.

A fourth survey was begun with the departure of the *Evergreen* from Argentia on the morning of 21 June. This survey was intended to include the waters over and immediately seaward of the northern and northeastern slopes of the Grand Banks and the Flemish Cap area northward of about 46°50' N., and eastward to about 43°30' W. The work of collection of data began on the evening of 22 June at the offshore corner of the Bonavista triangle and progressed counter-clockwise around the triangle, after which a network was occupied working southeastward to the final station which was completed on the afternoon of 2 July. It was not necessary to heave to on account of gales at any time, nor were there any other interruptions during the survey. From the final station the *Evergreen* proceeded to a point about 75 miles southeastward of Flemish Cap, where a carboy of surface water was collected for subsequent use as a substandard of salinity. The *Evergreen* then proceeded to Boston, arriving there on the afternoon of 7 July. During this survey 95 stations were occupied.

The *Evergreen* departed Boston on 15 July to begin the postseason cruise. En route to the first station, when off Trepassey Bay, Newfoundland, an electrical fire in the main propulsion motor disabled

the *Evergreen*, which was then towed to Boston for repair. Upon completion of the repairs the *Evergreen* again departed Boston on 17 August and the work of collection of data began at the offshore corner of the Bonavista triangle on the evening of 21 August. Work progressed in a counterclockwise direction around the triangle, and the last station of the triangle was completed on the afternoon of 24 August. From here the *Evergreen* proceeded to South Wolf Island, Labrador, and there, on the evening of 25 August, began a section across the Labrador Sea to Cape Farewell, Greenland. The final station of this section, and the initial station of a triangle southeastward of Cape Farewell, was completed on the late afternoon of 29 August. Work progressed in a clockwise direction around the Greenland triangle until the morning of 3 September, when increasing winds halted oceanographic work prior to the final approach to Cape Farewell. The following morning, work was resumed after a delay of 23 hours and the final station of the Greenland triangle and of the cruise was completed on the late evening of 4 September. The *Evergreen* then proceeded toward Argentina, stopping briefly en route to collect a carboy of surface water for subsequent use as a substandard of salinity. Argentina was reached on the afternoon of 8 September and, after loading freight and replenishing, the *Evergreen* departed on the evening of 8 September for Woods Hole with arrival there on the evening of 12 September. Oceanographic equipment and personnel were offloaded at the shore laboratory upon arrival to complete the field work for 1954. During the postseason cruise 28 stations were occupied in the Bonavista triangle, 24 stations made up the section across the Labrador Sea, and an additional 27 stations formed the Greenland triangle. Thus 79 stations were occupied during the post-season cruise.

The oceanographic work was under the supervision of Oceanographer Floyd M. Soule, who was assisted by LT John E. Murray. Other assistants in the observational work were Francis N. Brown, yeoman first class; Elwood C. Gray, aerographer's mate first class; Lewis M. Lawday, aerographer's mate second class; Hugh R. McCartney, Jr., aerographer's mate second class; Donald Zacher, aerographer's mate third class; and, during the fourth survey, Verne W. Schuenke, boatswain's mate third class.

Of the 440 stations occupied during season and post-season cruises, the 51 stations comprising the section across the Labrador Sea and the Greenland triangle were occupied from the surface to as near bottom as was practicable, and at the remaining 389 stations the observations extended to a depth of about 1,500 meters where the depth of water permitted. As in previous years the intended depths of observation, in meters, were 0, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1,000, and thence by 500-meter intervals. The dynamic heights have been referred to the 1,000-decibar surface, except for the section

across the Labrador Sea and the Greenland triangle where the heights have been referred to the 1,500-decibar surface.

In addition to the usual measurements of temperature and salinity, 617 samples were taken during the occupation of the South Wolf Island-Cape Farewell section and the Greenland triangle for ultimate determination of total phosphorus concentration. At 293 stations observations were made with black and white Secchi disks varying in time from April to September and in location from the Grand Banks region to the Greenland triangle with a variety of sky conditions and with the sun's altitude varying from 71° to 2° below the horizon.

Temperatures were measured with deep-sea reversing thermometers. Most of the protected thermometers used were of Richter and Wiese manufacture, but a small percentage were made by Negretti and Zambra, G. M. Manufacturing Co., and Kahl Scientific Instrument Corp. The depths of observation were based on unprotected thermometers made by Richter and Wiese and by Kahl. The thermometers were used in pairs and a program of intercomparison of protected thermometers was carried out by periodically changing the individual thermometers comprising the pairs. This permitted the identification of thermometers which were not functioning satisfactorily and which needed some thermal and mechanical manipulation to restore them to normal performance. It also provided a measure of the uncertainty of the temperature measurements. After eliminating constant corrections, these comparisons (2,994 in all) gave a probable difference between the corrected readings of a pair of thermometers of 0.011° C. Many of the thermometers had recent laboratory comparisons with thermometers tested by the National Bureau of Standards, and as in most cases the temperatures are means of the corrected readings of a pair of thermometers, it is considered that the observed temperatures listed in the table of oceanographic data have a probable error of about $\pm 0.01^{\circ}$ C.

The pressure coefficients of the unprotected thermometers used in 1954 are possibly in error by about one-half percent. The sign of the error is such that the tabulated depths are too great. Further work on the problem of more accurately determining the pressure coefficient an unprotected thermometer will have under field conditions is in progress at the Woods Hole Oceanographic Institution.

As in previous years routine salinity measurements were made with a Wenner salinity bridge. Prior to the beginning of the 1954 field work, the bridge was overhauled and cleaned and its calibration curve redetermined. The 1950 determination had given the expression:

$$S = \frac{9891.881}{200.2 + m} - 4.520,$$

where S is salinity in parts per thousand and m is the X-dial reading of the bridge at balance. The similar expression determined in 1954 is:

$$S = \frac{9892.513}{200.1 + m} - 4.531.$$

Over the range of salinities encountered in the area (30.2 to 36.6‰) the difference between these two curves may be compensated for with negligible error by adjustment of the X-dial reading selected as corresponding to the salinity of the Copenhagen standard water used (batch P17).

The Y-cell, which is filled with sea water simply to provide a bridge arm having thermal characteristics similar to those of the arm made up of the X-cell, undergoes a slow drift in its impedance as its contents is gradually concentrated through evaporation. It has been surmised that there also are erratic changes in its impedance as discrete drops of condensate return to the solution from the neck of the cell. The first change is evidenced by the slow change in the setting of the Y-dials necessary to bring the bridge onto the calibration curve during successive standardizations. As the range of adjustable impedance covered by the Y-dials has a finite limit, the evaporation from the Y-cell eventually reaches a point where the solution must be changed. In an attempt to remedy both the slow drift and the supposed erratic changes in the impedance of the Y-cell, a layer of oil about 1 mm. thick was placed on the surfaces of the solution in the cell and in the exhaust tube. No noticeable changes in the rate of drift resulted during the approximately 3-month period covered by the preliminary measurements ashore and the first two surveys. The oil layer was then increased in thickness to about 1 cm., with the result that the slow drift in impedance was very much reduced.

During the routine measurements standardizations were made with water from an oil-sealed carboy of sea water, and at least twice during each run a sample of Copenhagen standard water of batch P17 was measured as an unknown. At the end of each survey these measurements of Copenhagen water were used to compute such corrections as had to be made to the salinities measured during the survey. For each of the four surveys and the postseason cruise, the indicated corrections did not exceed 0.005‰ so no corrections have been made. These measurements of Copenhagen water indicate the salinity determinations were precise to about ± 0.005 ‰. The accuracy is, of course, limited to that of the silver nitrate titrations involved in determining the calibration curve of the salinity bridge.

The determinations of the total phosphorus concentration were carried out by personnel of the Woods Hole Oceanographic Institution, and the probable error is about ± 10 percent. With only minor

modifications the methods and procedures were those reported by Harvey.²

Figures 15, 16, 18, and 19 show, in chronological order, the current charts resulting from the four surveys made during the season. Figure 15 shows that at the time of the first survey, although the dynamic heights in the lowest part of the area were about normal, the highs of 971.72 in the Atlantic Current and 971.18 on the Grand Banks were exceptionally high and indicated a very active circulation both in the Labrador Current along the eastern slope of the Grand Banks and in the margins of the Atlantic Current shown in the southeastern part of the surveyed area. In the area south-southeastward of the Tail of the Banks, a pool of colder mixed water of undetermined extent was indicated beyond the southwestern limits of the survey. In the northeastern part of the survey there was a slow clockwise circulation around Flemish Cap, with a diversion of some of the Labrador Current water northward of it. This pattern persisted throughout the season and was probably responsible for the early season drift of bergs to the vicinity of Flemish Cap.

Comparison of figures 15 and 16 shows the extent to which the intrusion of Atlantic Current water spread northward between the first and second surveys. In the second survey, water of Atlantic Current characteristics was found as far north as $45^{\circ}20'$ N., and at single levels at stations 5411 and 5412 just north of 46° N. The Labrador Current along the eastern edge of the Grand Banks continued to feed the cold mixed-water pool which extended south of the southern limits of the survey. Labrador Current water did not extend westward of about $50^{\circ}20'$ W., and warm salty water had reached to the Grand Banks at 43° N., westward of $50^{\circ}15'$ W. This intrusion of water of the Gulf Stream was most in evidence at the section extending southwestward from station 5468. Figure 17 shows the temperature distribution along this section.

Figure 18, showing the results of the third survey, does not completely enclose all of the cold mixed-water pool even though the survey was extended unusually far to the south. The probable southern limit of berg drift was judged to be the 971.36-dynamic meter contour line, the course of which has been estimated in figure 18. Comparing figures 16 and 18 permits of following changes in pattern features common to both. The axis of the major valley in the southern part of the chart remained at about the 48th meridian. The branch valley which extended southwestward from the Tail of the Banks in the second survey moved southeastward, and in the third survey extended southwestward from about 42° N., 49° W. The topography along the southeastern edge of the surveyed area straightened out and the minor salients between it and the valley, only hinted at in

²Harvey, H. W., "The estimation of phosphate and of total phosphorus in sea waters." *Journ. Mar. Biol. Assoc.*, vol. XXVII, pp. 337-359 (1948), Plymouth, Eng.

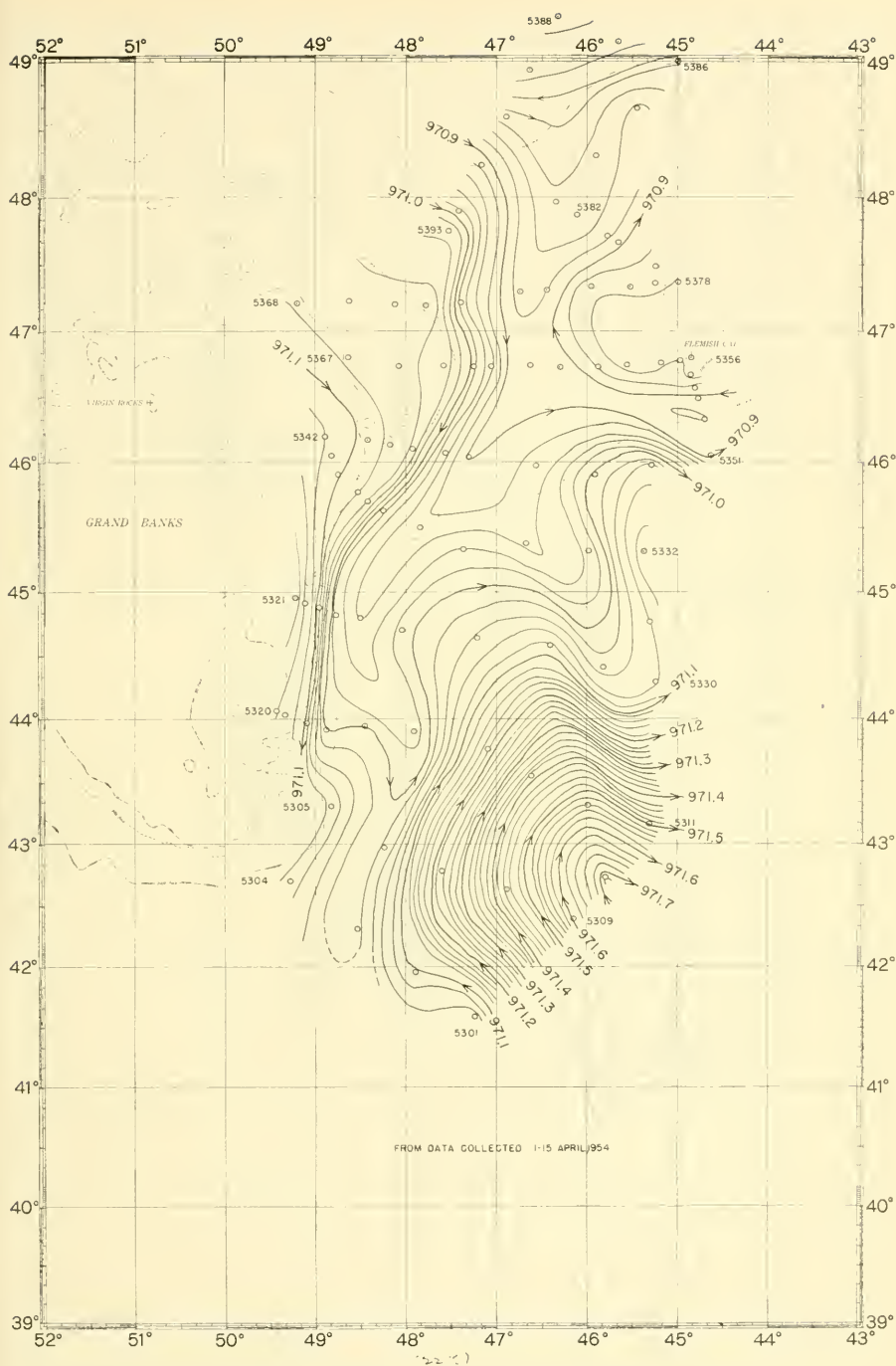


FIGURE 15.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 1–15 April 1954. Oceanographic station positions are indicated and the station numbers given at turning points.

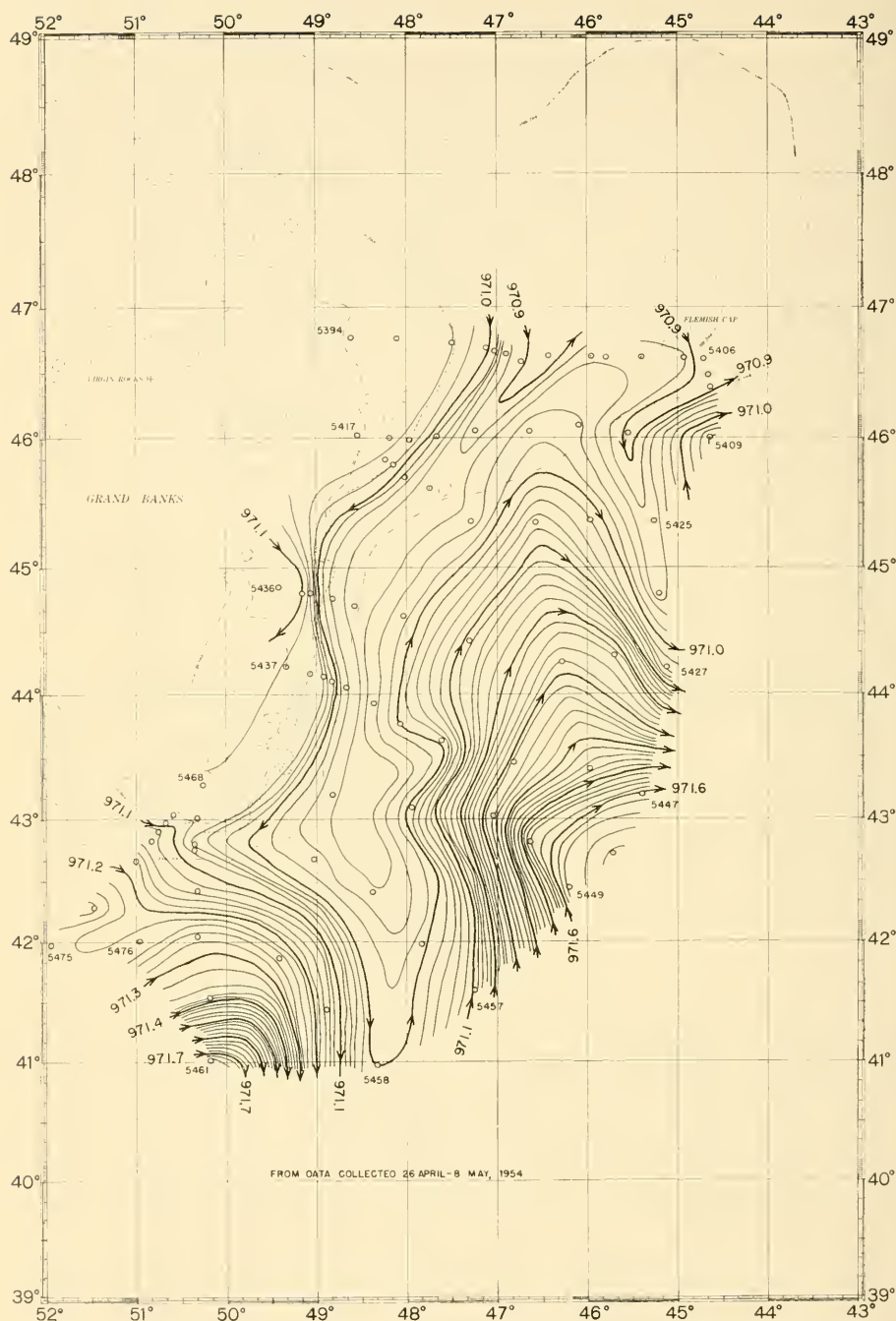


FIGURE 16.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 26 April–8 May 1954. Oceanographic station positions are indicated and the station numbers given at turning points

figure 16, developed into interlocking high and low meanders in figure 18. One of these, developing westward along the 44th parallel, was accompanied by a greater eastward diversion of Labrador Current water in the lower dynamic heights northward of that latitude. The high meander, centered at 46° N., on the eastern edge of the second survey, developed westward and was centered at about 45°20' N., in the third survey.

Figure 19, representing the dynamic topography found during the fourth survey, shows in greater detail the pattern of diversion of Labrador Current water eastward north of Flemish Cap and southward east of Flemish Cap. From the standpoint of berg mortality it is worthy of mention that in this survey the minimum temperatures in the cold core of the Labrador Current were uniformly about -1.5°C at all sections over the slopes of the Grand Banks, but the minimum temperatures in the cold core of the water in the eddy around Flemish Cap were about 2.0° at the periphery and about 3.5° at the center.

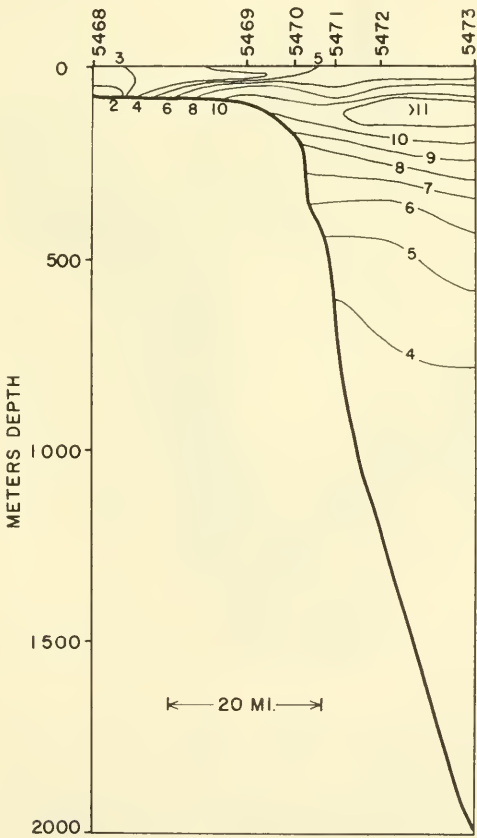


FIGURE 17.—Temperature distribution off southwestern slope of Grand Banks from data collected 7 May 1954.

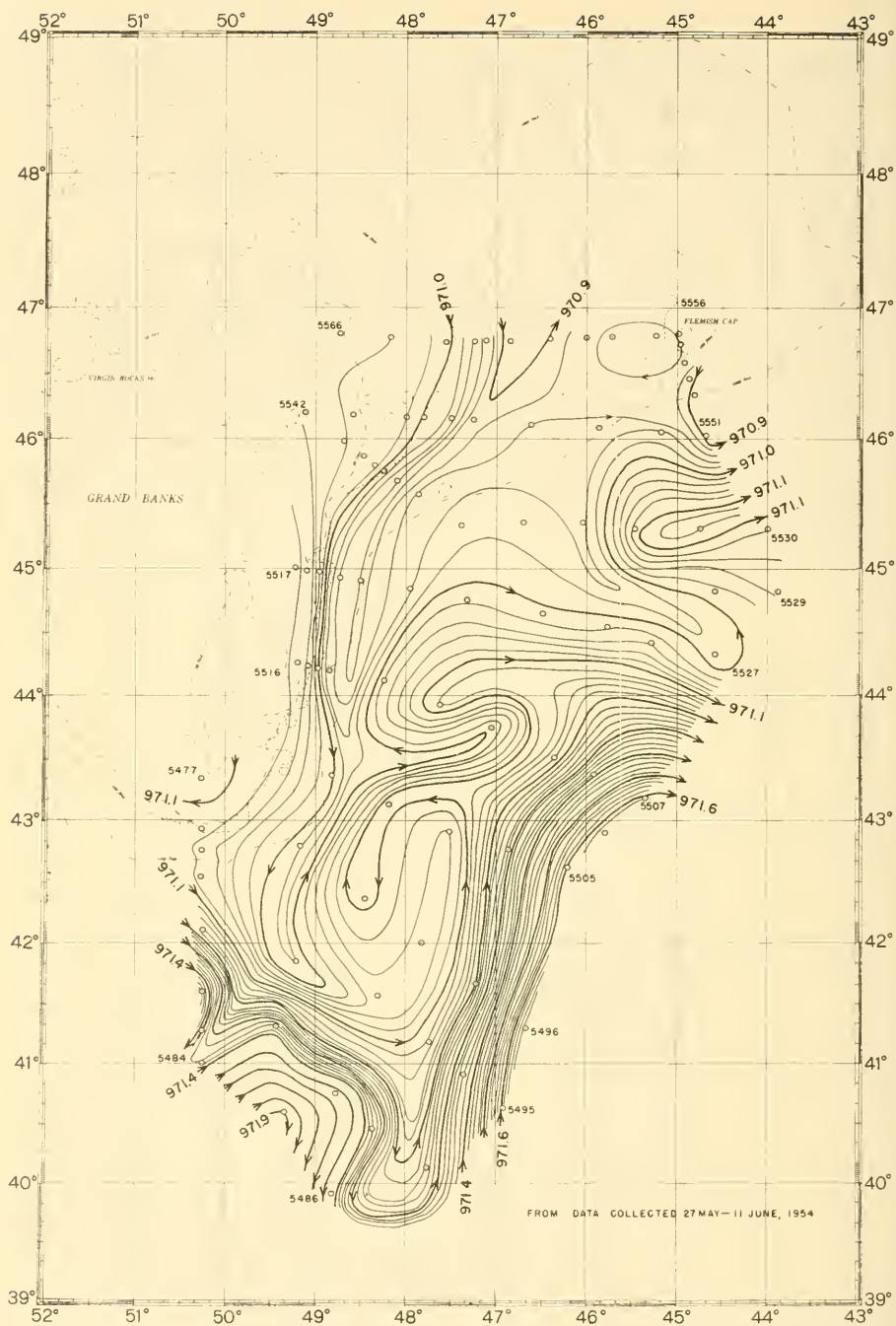


FIGURE 18.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 27 May-11 June 1954. Oceanographic station positions are indicated and the station numbers given at turning points.

**Table 1.—SUMMARY OF VELOCITY SECTIONS ACROSS LABRADOR
CURRENT OCCUPIED IN 1954**

Section	Volume transport			Mean temperature			Minimum observed temperature			Heat transport		
	1954	Normal	Anomaly	1954	Normal	Anomaly	1954	Normal	Anomaly	1954	Normal	Anomaly
1st survey:												
H.....	3.90	-----	-----	0.89	-----	-----	-1.56	-----	-----	3.46	-----	-----
F.....	3.16	-----	-----	0.61	-----	-----	-1.51	-----	-----	1.92	-----	-----
T.....	3.73	3.28	+0.45	1.09	1.97	-0.88	-1.42	-1.43	+0.01	4.05	6.46	-2.41
U.....	5.28	5.40	-0.12	0.80	1.42	-0.62	-1.16	-1.24	+0.08	4.25	7.67	-3.42
2d survey:												
F.....	3.64	-----	-----	1.33	-----	-----	-1.50	-----	-----	4.84	-----	-----
T.....	2.87	3.58	-0.71	1.68	1.85	-0.17	-1.44	-1.32	-0.12	4.83	6.62	-1.79
U.....	4.37	4.78	-0.41	0.82	2.02	-1.20	-1.09	-1.15	+0.06	3.58	9.66	-6.08
W.....	0.26	4.12	-3.86	5.35	2.90	+2.45	0.07	-0.55	+0.62	1.38	11.95	-10.57
3d survey:												
F.....	2.45	-----	-----	1.56	-----	-----	-1.59	-----	-----	3.81	-----	-----
T.....	2.19	2.67	-0.48	2.04	1.83	+0.21	-1.23	-1.55	+0.32	4.47	4.89	-0.42
U.....	4.52	3.63	+0.89	1.81	2.32	-0.51	-0.63	-1.24	+0.61	8.17	8.42	-0.25
W.....	0.65	4.12	-3.47	2.42	3.20	-0.78	-1.09	-0.35	-0.74	1.57	13.18	-11.61
4th survey:												
NW.....	2.80	3.81	-1.01	0.17	1.26	-1.09	-1.73	-1.66	-0.07	0.49	4.80	-4.31
SW.....	0.89	0.54	+0.35	-0.16	-0.19	+0.03	-1.61	-1.64	+0.03	-0.14	-0.10	-0.04
SE.....	1.72	3.20	-1.48	1.68	1.81	-0.13	-1.25	-1.55	+0.30	2.90	5.79	-2.89
H.....	3.44	-----	-----	1.97	-----	-----	-1.25	-----	-----	6.80	-----	-----
F.....	2.90	-----	-----	2.45	-----	-----	-1.49	-----	-----	7.10	-----	-----
Postseason:												
NW.....	3.36	4.55	-1.19	1.89	1.73	+0.16	-1.67	-1.52	-0.15	6.34	7.87	-1.53
SW.....	0.45	0.80	-0.35	1.26	0.62	+0.64	-1.65	-1.66	+0.01	0.56	0.50	+0.06
SE.....	2.84	3.58	-0.74	1.63	2.36	-0.73	-1.59	-1.65	+0.06	4.64	8.45	-3.81
South Wolf Island.....	7.84	4.73	+3.11	2.39	2.49	-0.10	-1.58	-1.48	-0.10	18.72	12.30	+6.42

More detailed study of the circulation in the upper 1,000 meters, with special reference to the Labrador Current, has been made in recent years through the examination of the volume of flow, mean temperature, and heat transport of that current across selected vertical sections. In 1954 this study included 21 occupations distributed among 9 different sections. Sections T, U, and W are located as follows: T extending southeasterly from about 46°20' N., 49°00' W.; U extending eastward from the Grand Banks at about 45° N.; W extending southward from the Grand Banks at about 50° W. Rough approximations to normal seasonal variation relationships have been developed for these three sections and were published in bulletin No. 36 of this series. Rough normal seasonal variation relationships for the sections NW, SW, and SE, comprising the sides of the Bonavista triangle, were published in bulletin No. 39 of this series. The results of the 1954 occupations of these sections have been compared with these seasonal normals. The South Wolf Island section has been occupied 17 times in as many different years from 1928 to 1954, most of the measurements having been made at about the same time of year. The results of the 1954 occupation of this section have been compared with average values. For the sections F (between Flemish Cap and the Grand Banks) and H (between sec. F and the Bonavista triangle) there are insufficient data on which to base average values for comparison. Table 1 summarizes the results of the velocity sections across the Labrador Current occupied

in 1954 compared with normal or average values where available. In this table as well as in subsequent tables, figures and discussion, the units are as follows: volume of flow, 1 million cubic meters per second; mean temperature and minimum observed temperature, degrees C; heat transport, 1 million cubic meter degrees C per second.

From table 1 it will be noted that, in spite of the considerable diversion of Labrador Current water eastward north of Flemish Cap, the volume transport past section T was above normal during the first survey and that past section U was nearly normal and the mean temperature was decidedly colder than normal. During the second survey the normal seasonal increase in volume of flow did not occur and the transport past sections T and U dropped below normal. As the Labrador Current was not rounding the Tail of the Banks to the westward, the transport past section W was small. The mean temperature at section T was nearly normal, but that at section U held its early season value so that it was more than a degree colder than normal. By the time of the third survey the transport past section T was still below normal, but at section U a slight increase instead of the seasonal decrease brought the volume well above normal. The mean temperature rose at each of these sections to bring that at section T above normal and leaving that at section U about a half degree below normal. The minimum temperatures, which had been close to normal at both sections during the first two surveys, rose to 0.3° and 0.6° above normal during the third survey. The interpretation of the tabulated values in table 1 and the surface topography shown in figures 15, 16, and 18 is that the larger volume transport at section U compared with section T represented contributions of waters from the northward west of section T during the first and second surveys and that during the third survey some of this additional volume transport was contributed by a closed circulation over the Grand Banks.

Figure 20 shows the dynamic topography found during the post-season cruise at the Bonavista triangle. This is separated in point of time by about 2 months from the occupation of the triangle during the fourth survey. Also, its date in the latter part of August is later than the season of the year covered by the normal seasonal variation relationships given in bulletin No. 39. The normals with which it has been compared are therefore of doubtful applicability. Table 1 shows the volume transport as below normal past sections NW. and SE. and above normal past section SW. at the time of the fourth survey. The tabulated values are for the net transport past each of the sections. Usually the offshore corner of the triangle is close enough to the line of zero velocity between the Labrador Current and the northward flow offshore of it so that the net transport for the section is a good measure of the Labrador Current at the triangle. At the time of the fourth survey, however, the offshore corner was well into

the northbound current, and in fact included about 1.0 million cubic meters per second of northward-moving water. The tabulated transport values should therefore be increased by about 1.0 for both sections NW. and SE. to obtain the transport of the Labrador Current for the fourth survey. Thus the transport was about normal at these sections and about 0.4 above normal at section SW. The proportion of the total Labrador Current following the eastern branch was 78 percent, which is below normal for this time of year. At the time of the postseason cruise the volume transport had dropped to values even smaller than the supposed normals for the time of year. Although the proportion of the total Labrador Current flowing in the eastern branch normally decreases seasonally, it increased in 1954

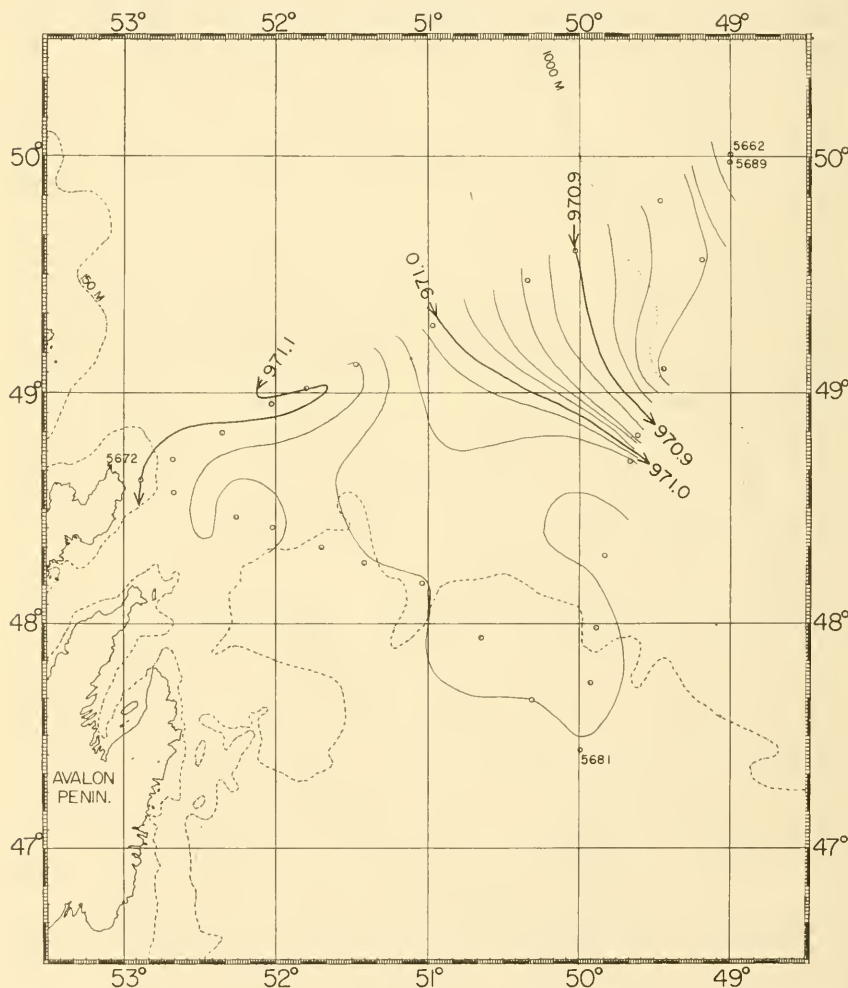


FIGURE 20.—Dynamic topography of the sea surface relative to the 1,000-decibar surface from data collected 21-24 August 1954. Oceanographic station positions are indicated and the station numbers given at turning points.

and was 86 percent at the time of the postseason cruise instead of the supposed normal of 81 percent. As figure 20 indicates, there also was some northward-flowing water inside the offshore corner of the Bonavista triangle during the postseason cruise. The volume transport of the Labrador Current past the triangle was therefore somewhat larger than tabulated for the postseason cruise, but the difference was much smaller than for the fourth survey. It has been neglected here and is not of the same order of magnitude as the difference between the volume transport at the triangle and that of the Labrador Current off South Wolf Island only 3 days later.

The circulation deduced from table 1 has been shown schematically in figure 21. In this figure the volume transports have been rounded off and adjusted in the Bonavista and Greenland triangles on the assumption that there was no appreciable vertical transport past the reference surfaces. Further reference will be made to this figure after consideration of the sections occupied in the Greenland area during the postseason cruise.

It was pointed out in bulletin No. 39 of this series that more often than not the minimum observed temperature was colder at the Bonavista triangle than at the South Wolf Island section. This was true again in 1954 when the minimum observed temperature at the triangle was -1.67°C with a corresponding salinity of 33.15‰ , whereas the minimum observed temperature off South Wolf Island was -1.58°C with a corresponding salinity of 32.85‰ . Comparable average values for the 7 years during which observations have been made are -1.65°C , 33.14‰ , -1.53°C , and 32.81‰ . Since 1949 the volume transport of the Labrador Current at the South Wolf Island section has been greater than average with the transport in 1954 exceeding any of the other 16 years. Since 1950 its mean temperature has been consistently above average until 1954, when it dropped to 0.1° below average. The heat transport in 1954 is consequently a high value, exceeded only by that in 1933, when a large volume transport was accompanied by a high mean temperature.

Labrador Current water and Atlantic Current water present in the Grand Banks region have been found to have characteristic temperature-salinity relationships identifying them as water masses. Usually also the mixed water formed from these parent water masses has a sufficiently uniform proportion of the parent water masses so that it can be regarded as a virtual water mass. The first three surveys of the 1954 season were examined for T-S relationships. The fourth survey was omitted as being located outside the area which has been the source of the T-S data considered in the past. Figure 22 shows the relationships found in 1954, as solid lines, in comparison with the averages for the 8-year period 1934-41, shown in broken lines. In general, all three water masses were lighter than the prewar average. The differences were least in the Labrador Current water and here

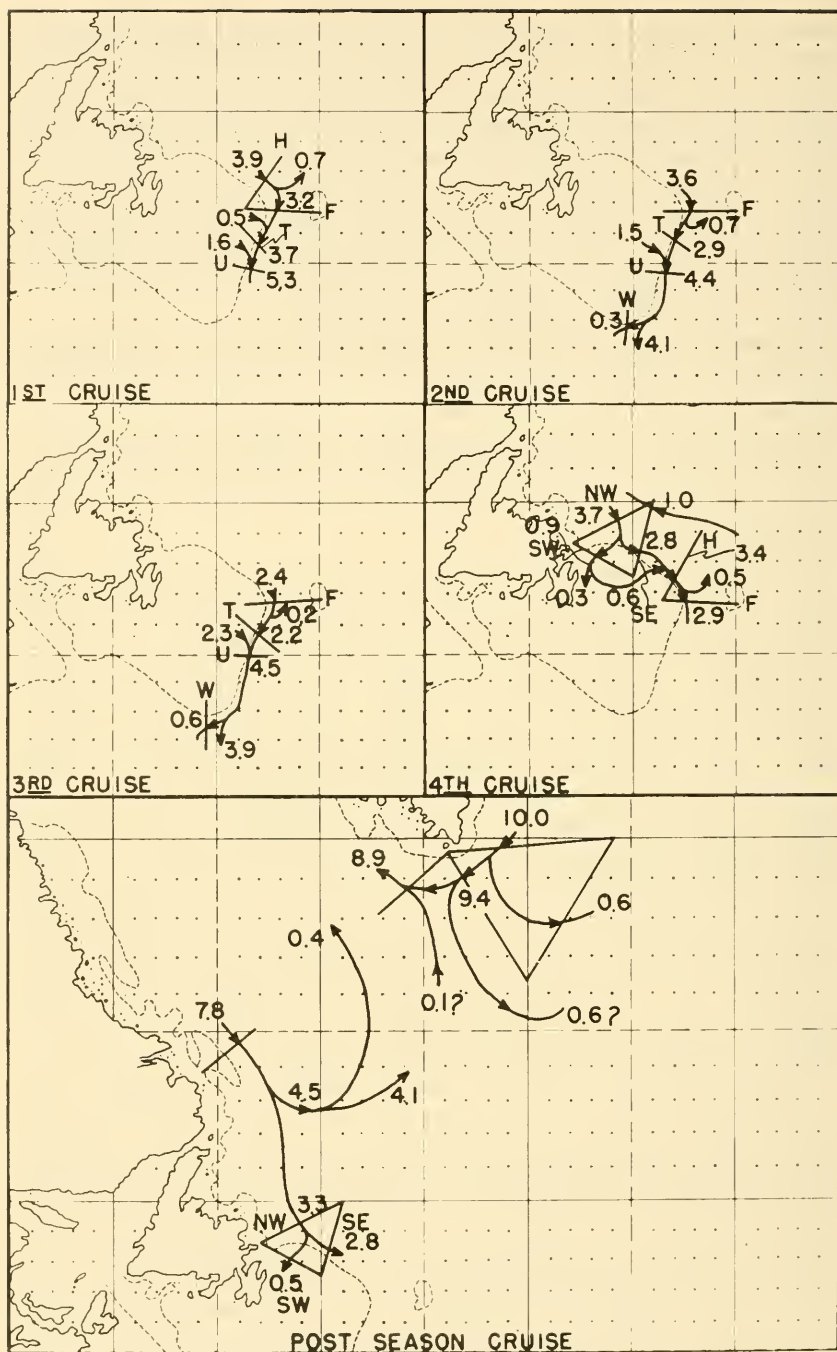


FIGURE 21.—Schematic representation of circulation deduced from sections occupied during 1954. Numerals indicate volume transport in units of cu. m/sec. $\times 10^6$.

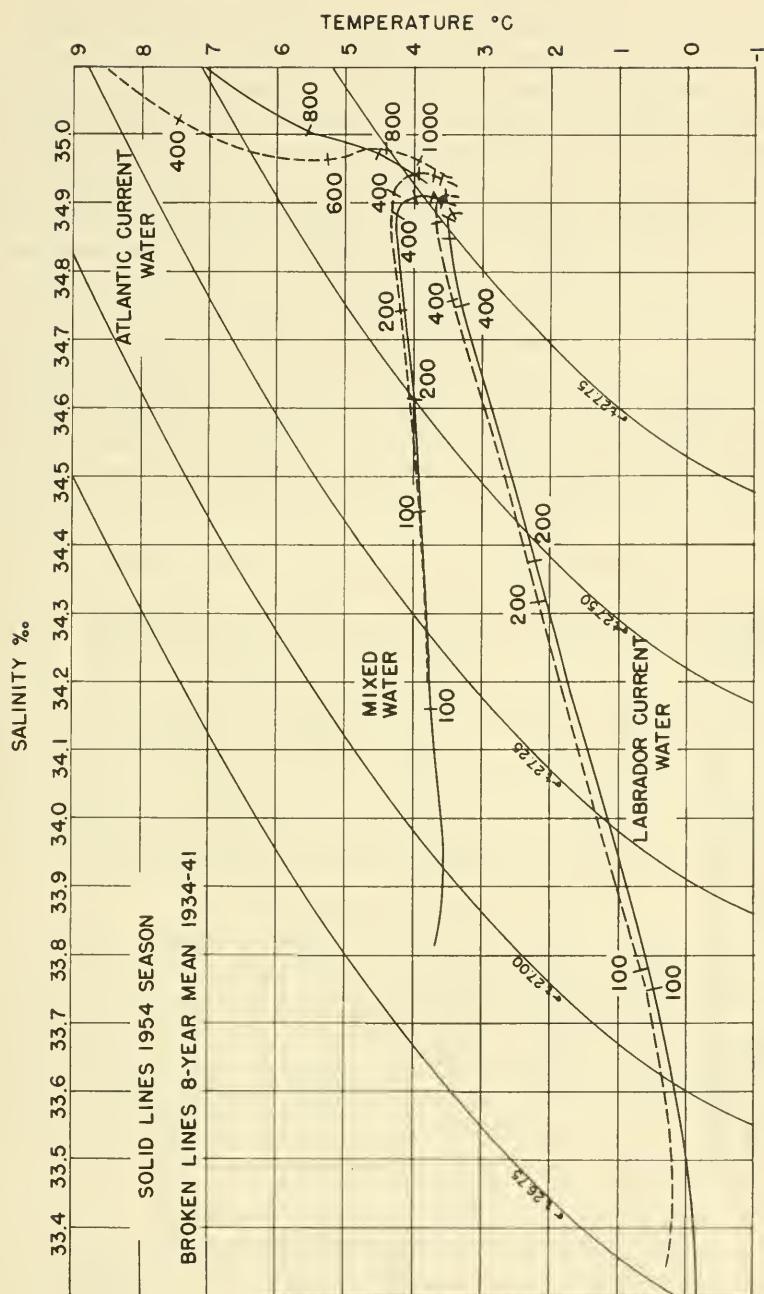


FIGURE 22.—Temperature-salinity relationships for Labrador Current water, Atlantic Current water, and mixed water found in the Grand Banks region. Solid lines show conditions during the 1954 season and broken lines represent the 8-year mean for the period 1934-41. An approximate depth scale in meters is given.

(except for the 200-meter level) lower salinities were largely compensated for by lower temperatures. In the mixed water the principal difference is in the salinity which was less than the 8-year average in 1954. The shape of the characteristic curve for Atlantic Current water was materially different in 1954 from that of the 8-year average. The bulge toward lower salinity at a temperature of about 6° was markedly less. This is probably because more of the 1954 stations were farther into the Atlantic Current than is usual and the bulge is a feature of the outer margins of this current in the Grand Banks sector. The lower densities were the result of higher temperature, with the temperature effect outweighing the effect of higher than average salinities down to about 1,000 meters. Below 1,000 meters in the Atlantic Current the salinities found in 1954 were about average.

The second and third surveys each contained a number of stations where the water was atypical and irregularly intermediate between Atlantic Current water and mixed water. In the second survey the warm water thrust toward the southwestern edge of the Grand Banks was made up of these stations. The third survey had these stations

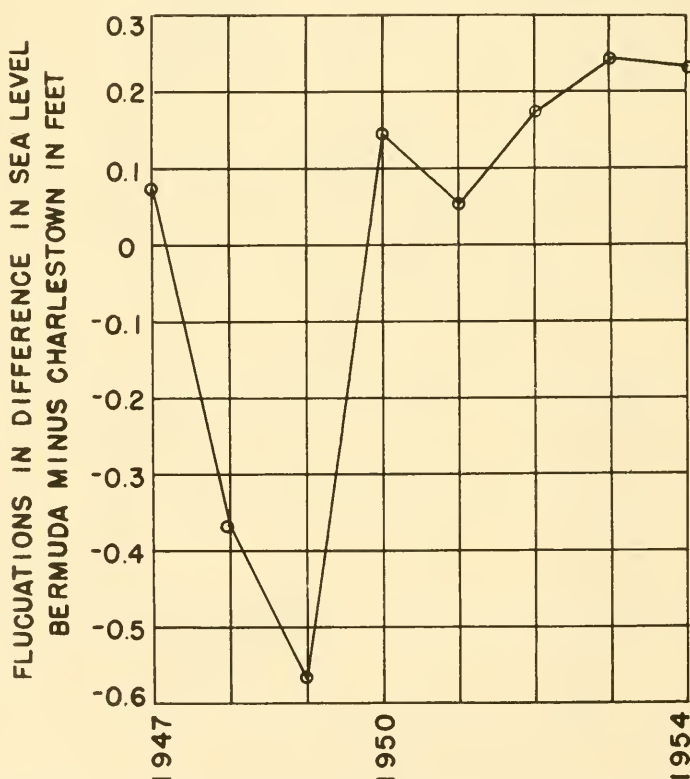


FIGURE 23.—Fluctuations in the activity of the North Atlantic eddy during the years 1947–54 as indicated by the changes in the difference in sea level Bermuda minus Charleston.

distributed downstream between the mixed water and the Atlantic Current water.

The position of the cold wall is an important factor in determining the southern limits of berg-infested waters in the vicinity of the Grand Banks. Its fluctuations have been studied and reported on in earlier bulletins of this series. As it is not necessarily a vertical boundary, the boundary selected for study is the horizontal projection of the line along which a temperature of 6° corresponds to a salinity of 34.95‰. The position of this boundary has been described numerically by the area between it and fixed rhumb lines northwestward of it (the 45th parallel, the 49th meridian from 45° N., to 43° N., and a line from 43° N., 49° W., through 42° N., 47° W.). Thus, as the boundary moves toward the Grand Banks, the area decreases. It was considered that the position taken up by the boundary was determined partly by forces associated with the North Atlantic eddy and partly by forces associated with the Labrador Current. An assumption was made that the area would be increased by 10,000 square kilometers for each million cubic meters per second volume transport of the Labrador Current entering the area past section U. After subtracting such an amount from the area to obtain an adjusted area, A , this adjusted area was considered as representing the effects of causes associated with the Gulf Stream system. A further assumption was made that these causes were related to the difference in sea level between Bermuda and Charleston, S. C., and hence that fluctuations in A would be related to fluctuations in this sea-level difference. With sea level at Charleston minus the departure from average sea level at Bermuda, in feet, designated as H , and A in units of 10,000 square kilometers with a time lag of $13\frac{1}{2}$ months, 27 surveys made during the ice patrol seasons 1934-41 gave the expression

$$A = 6.8 (H - 5.07) + 1.34.$$

Following the interruption of World War II, surveys were resumed in 1948. The postwar surveys have not agreed with the above relationship but followed a similar relationship if $11\frac{1}{2}$ months was used as the time lag instead of $13\frac{1}{2}$ months. Ten surveys made during the period 1948-52 were combined with the 27 prewar surveys, using $11\frac{1}{2}$ months for the postwar time lag, to derive the expression

$$A = 6.97 (H - 5.07) + 1.67.$$

Two further surveys made in 1953 did not fit either of the above expressions, and examination of the fluctuations in sea level indicated that the time lag might have been either $11\frac{1}{2}$ or $13\frac{1}{2}$ months. Three surveys made in 1954 indicated the $11\frac{1}{2}$ month time lag was still applicable and the actual values of A were -0.03 , 1.31 , and 3.35

compared with values computed with the 1952 expression of 0.83, 0.07, and 2.65.

The quantity H involves the sea level at Charleston and the departure from average sea level at Bermuda. Average sea level at Charleston enters the constant 5.07. Part of the difficulty in obtaining a good correlation in the postwar years is believed to be the changes in relative sea level which have taken place at both stations. The average sea level at Charleston for the 8-year period 1947-54 is 0.27 foot higher than during the prewar 8-year period 1933-40, and the postwar average sea level at Bermuda is 0.10 foot higher than that for the prewar period. Another possible difficulty is the exceptionally large variation in difference in sea level at these stations during the postwar period. Figure 23 shows the fluctuations in annual average values of the difference in sea level Bermuda minus Charleston. If this is taken as a measure of the activity of the North Atlantic eddy and if the total difference in sea level is inferred from density distribution, the range of 0.8 foot shown in figure 23 represents a fluctuation of about 30 percent. It is possible that the simple expressions given above may represent the relationship between the sea-level difference, the strength of the Labrador Current and the position of the cold wall in the Grand Banks region adequately for small changes, but become inadequate when major changes in the driving forces require the establishment of large compensating circulation patterns.

Figure 24 shows the dynamic topography of the sea surface relative to the 1,500-dicibar surface from the observations made during the 1954 postseason cruise along the section across the Labrador Sea and the Greenland triangle. The temperature and salinity distribution along these four sections are shown in figures 25 to 32. In figure 25 it will be noted that the temperature minimum in the Labrador Current over the shelf has only a small cross section colder than -1.5° . The temperature maximum reaching bottom at intermediate depths along the continental shelf is defined by the 3.5° isotherms and contains observed temperatures up to 3.79° . The temperature minimum at intermediate depths in the central part of the section is indicated by the area enclosed in the 3.2° isotherm. Although the area thus enclosed is small, the temperature of the minimum is close to that of the colder years 1934-39 and 1950 when the minimum was about 3.17° . During the other 7 years for which data are available (1940-41, 1948-49, and 1951-53), the minimum was about 0.10° to 0.15° warmer. The temperature maximum below this minimum was for the most part less than 3.3° . At the Greenland end of the section the warm water of the West Greenland Current had about the same cross-sectional area with water warmer than 4° as was found in 1953, but the areas enclosed by the 5° and 6° isotherms was greater in 1954.

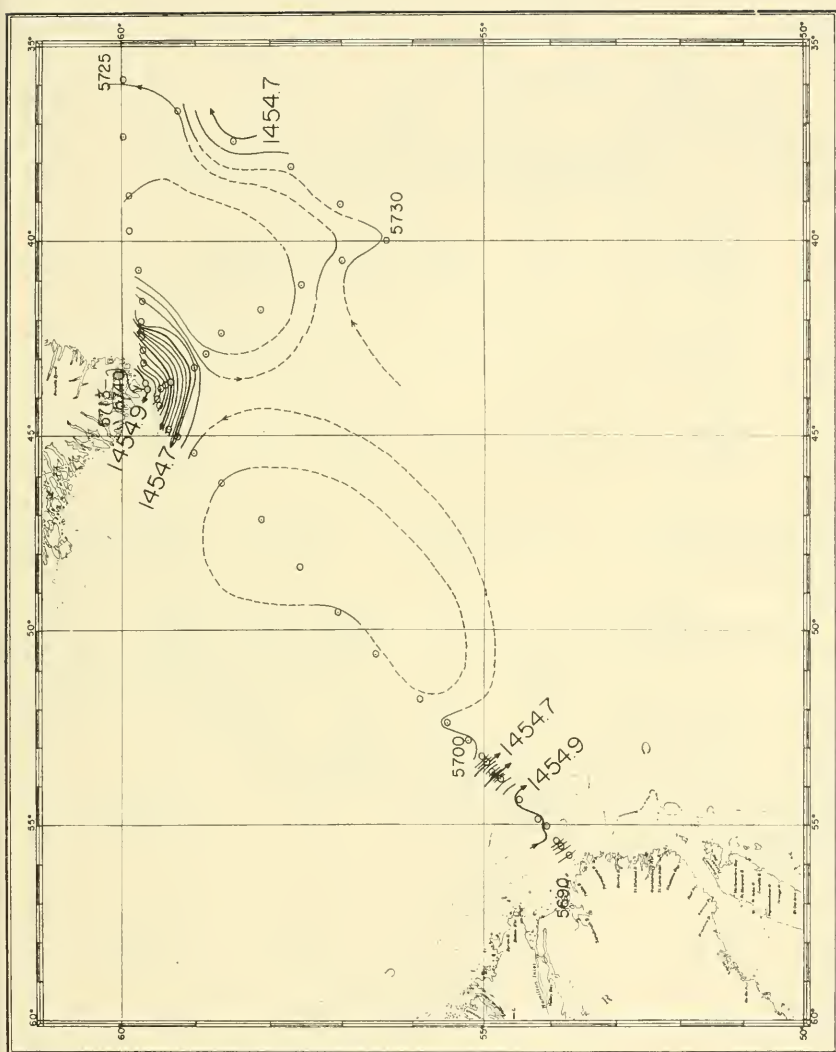


FIGURE 24.—Dynamic topography of the sea surface relative to the 1,500-decibar surface from data collected 25 August–4 September 1954. Oceanographic station positions are indicated and the station numbers given at turning points.

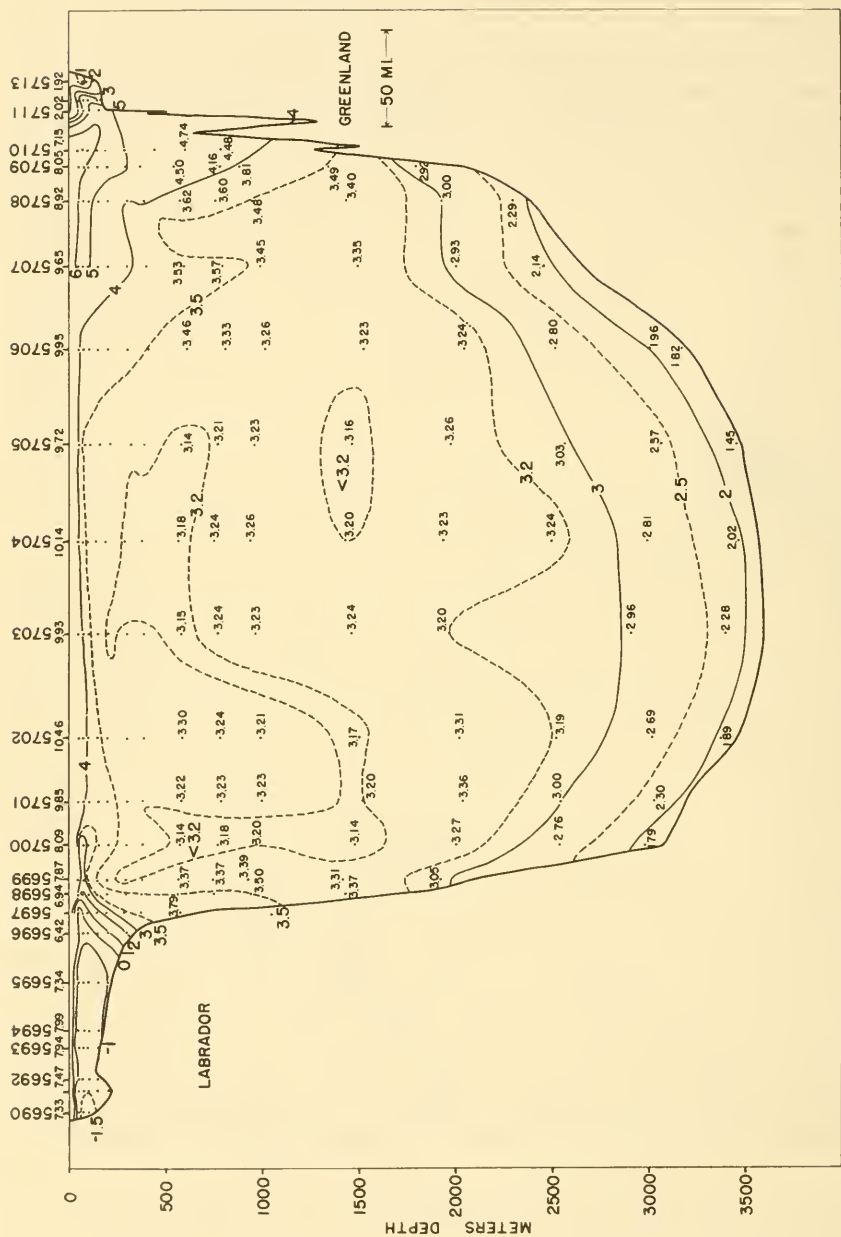


FIGURE 25.—Temperature distribution between South Wolf Island, Labrador and Cape Farewell, Greenland, 25–29 August 1954.

The surface topography shown in figure 24 indicates a simpler pattern in the Labrador Sea than that found in 1952 and 1953, when the extreme outer margins of the North Atlantic eddy reached north-westward as far as this section. The contribution of offshore water of the Labrador Current to the offshore part of the West Greenland Current between stations 5708 and 5709 may not be as direct as indicated in figure 24. The higher temperatures of this water in the

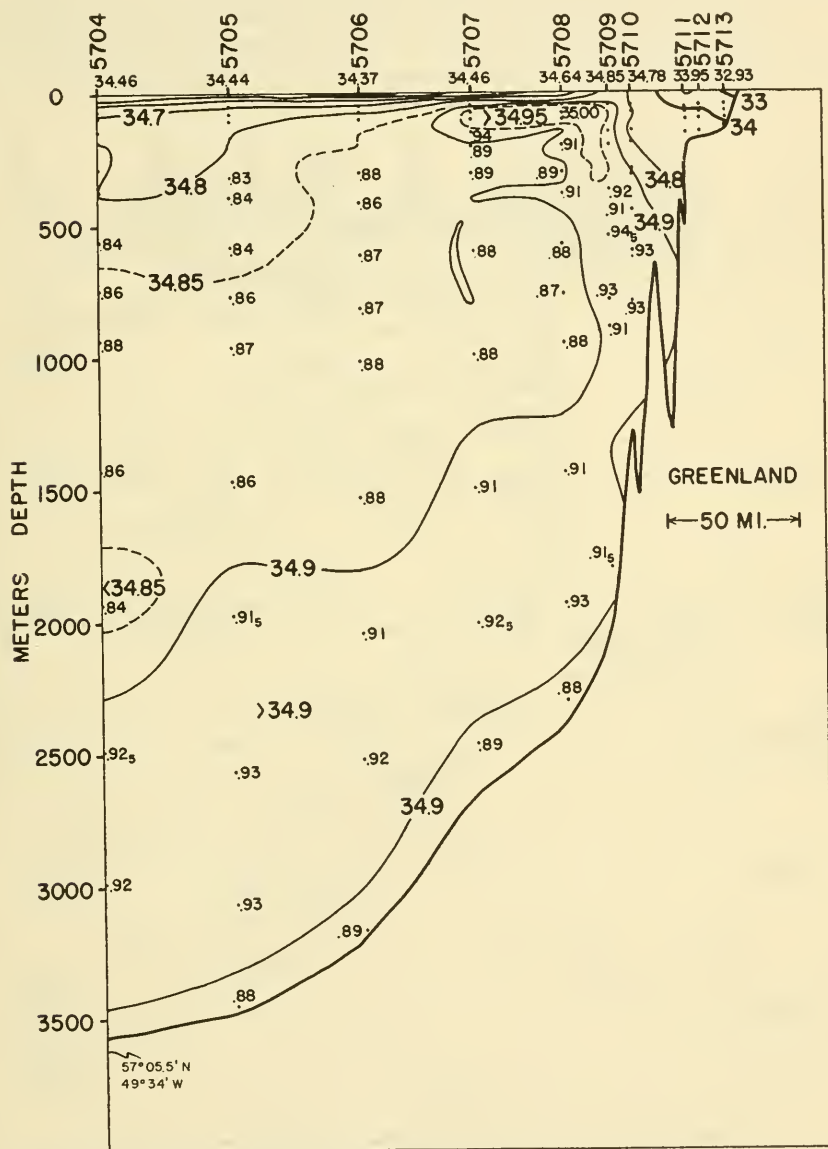


FIGURE 26.—Salinity distribution southwest of Cape Farewell, Greenland, 27–29 August 1954.

West Greenland Current suggests that the Labrador Current water has been mixed with some North Atlantic Current water in its journey northeastward although this may be the result of seasonal warming. Below the surface in the West Greenland Current the salinity reached a maximum of 35.00‰ , with a small cross-sectional area of greater than 34.95‰ as shown in figure 26. While this is a decided increase over 1953 when the maximum found was 34.925‰ , it is still short of the 35.04‰ found consistently during the prewar years.

The volume transport of the West Greenland Current past this section was found to be 8.95, with a mean temperature of 4.95° and a heat transport of 44.33. On the basis of constant mean temperatures

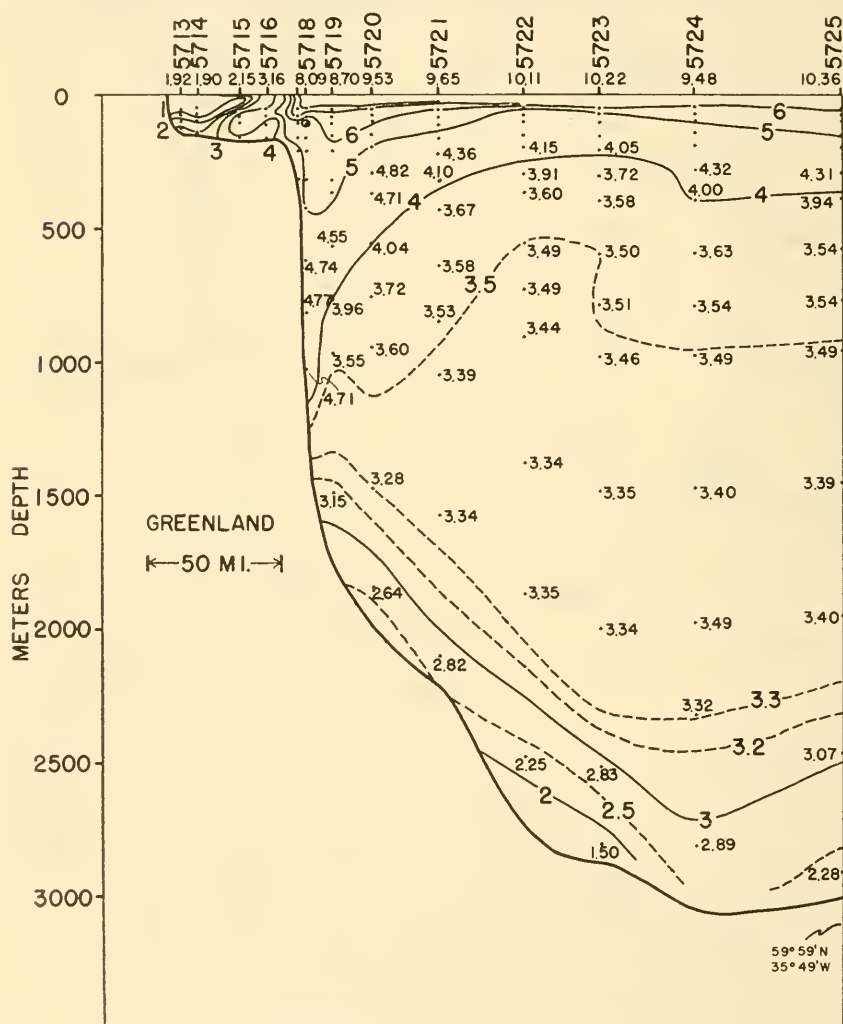
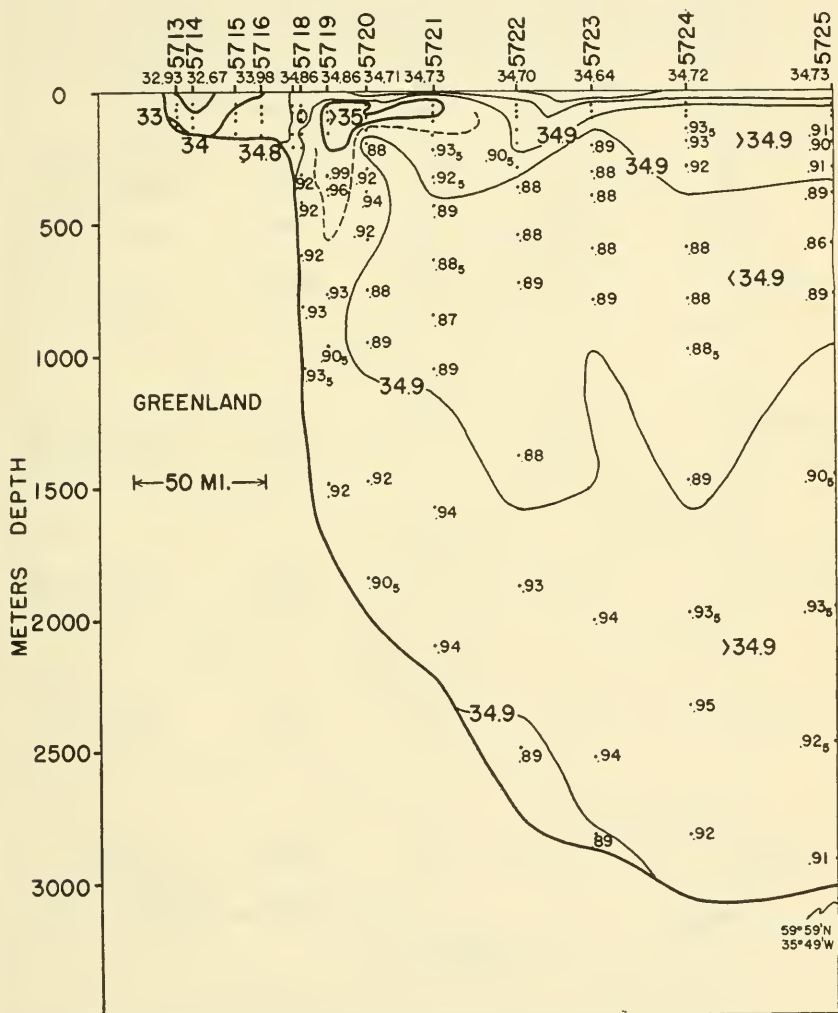


FIGURE 27.—Temperature distribution east of Cape Farewell, Greenland, 29-31 August 1954.

of 3.2° for the East Greenland Current component and 5.5° for the Irminger Current component, the observed volume transport breaks down into 2.13 and 6.82, respectively, for these components, compared with seasonal normal volume transports for these components of 0.09 and 4.42. On this basis then, each of the components were about 2 above normal in volume with a resulting heat transport 24.60 above normal. In view of the low salinity maximum it is quite possible that more of the West Greenland Current past this section approaches from the south than the 0.1 estimate shown in figure 21.

In examining the complete South Wolf Island-Cape Farewell section for volume of flow it was found that, if the velocities are referred to



the 1,500-decibar surface, the net volume transport was 1.46 north-westerly. Although available observations are few, our conception of the circulation balance is that there is a small net contribution through the northern openings into the Baffin Bay-Labrador Sea system and a small sinking and outflow into the North Atlantic below the reference surface. These have been estimated to be of the order of a million cubic meters per second. If the reference surface of 1,500 decibars is acceptable, the sinking and outflow below it must have exceeded the

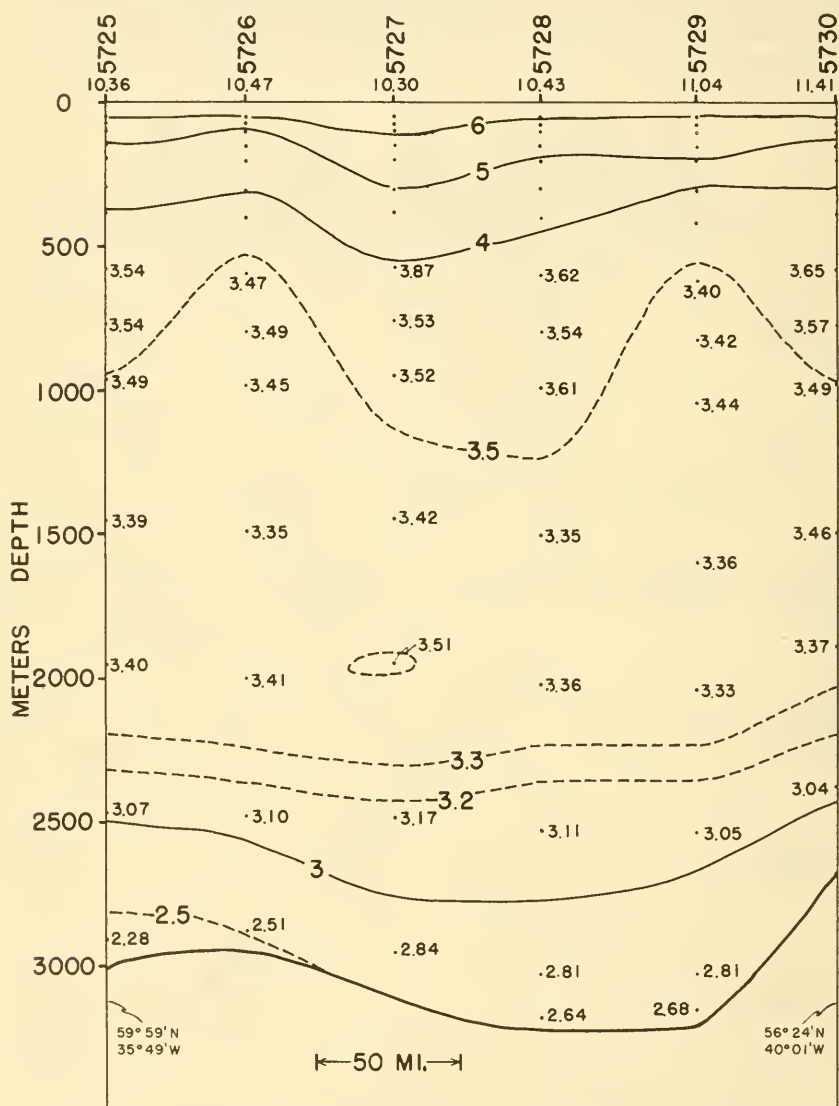


FIGURE 29.—Temperature distribution along offshore leg of Greenland triangle 31 August–2 September 1954.

contributions through the northern openings by the net northwesterly volume transport across this section. The value of 1.46 is larger than the errors of the methods used, and reference to the density distribution along the section indicates the 1,500-decibar surface was probably close to being the most nearly motionless at the time of the observations. The conclusion reached is that either the contributions through the northern openings were smaller or the sinking and outflow in the deep water was greater than usual or both.

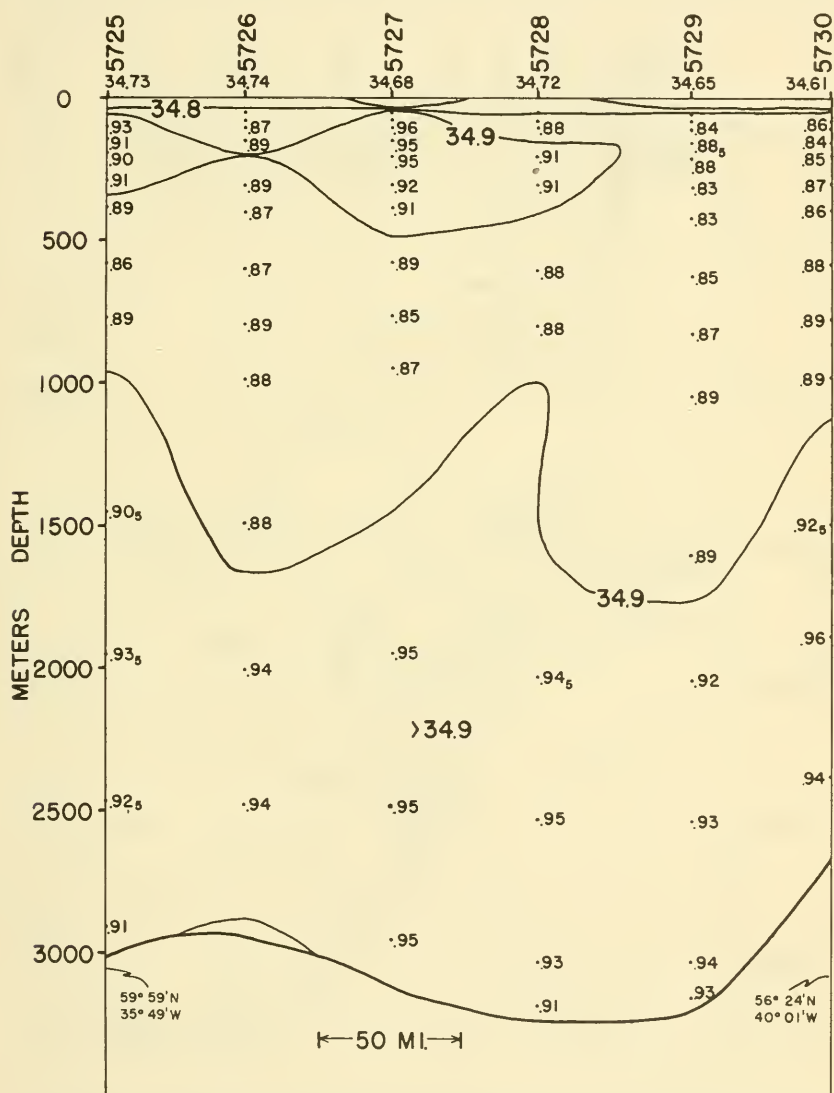


FIGURE 30.—Salinity distribution along offshore leg of Greenland triangle 31 August–2 September 1954.

Velocity profiles have been examined for each of the three sides of the Greenland triangle, and the resulting volume transports for the north, southeast, and southwest sides were 10.49, 0.47, and 8.99, respectively. As these figures indicate about 10 percent greater volume transport into the triangle than that leaving it, the computed volumes have been adjusted to equality for representation in figure 21. The mean temperatures for the sections, in the same order, were 5.37, 5.62, and 5.15, resulting in heat transports of 56.28, 2.65, and 46.25, respectively. As the point of beginning and ending was at the shallow corner of the triangle, it is difficult to make any straight-

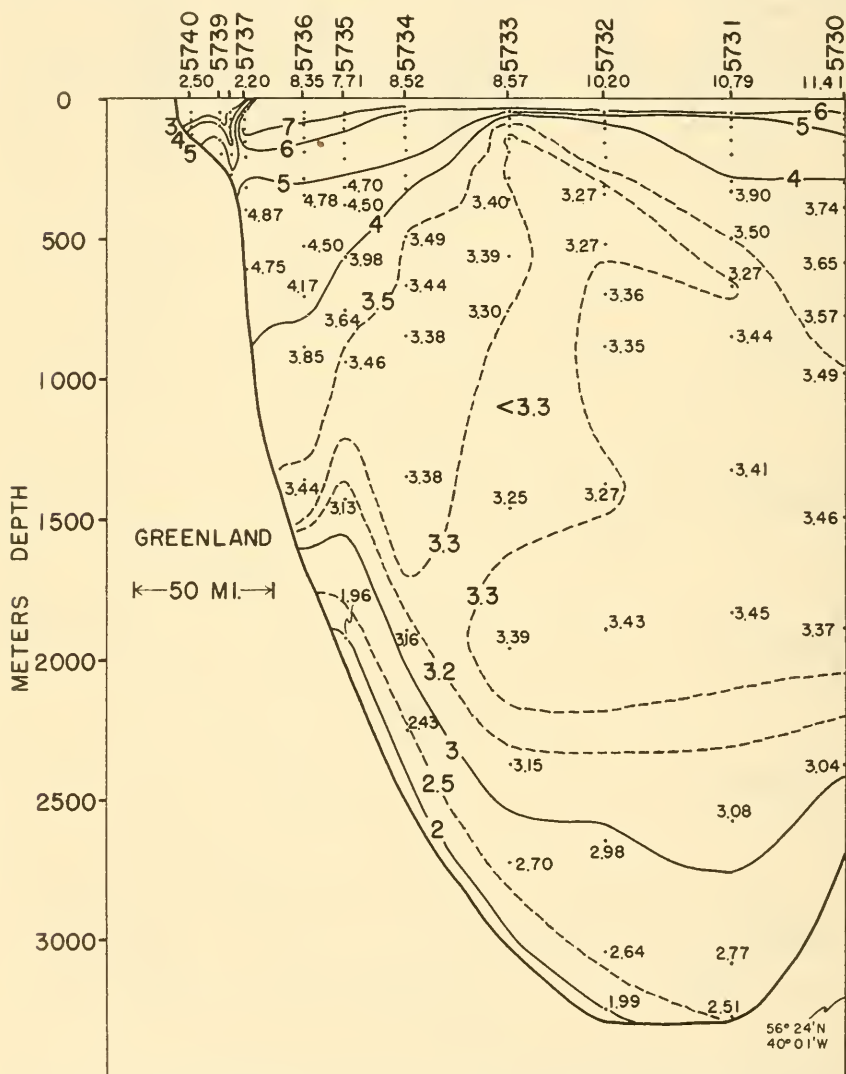


FIGURE 31.—Temperature distribution southeast of Cape Farewell, Greenland, 2-4 September 1954.

forward allowance for time changes which no doubt resulted from the gale which occurred between the occupation of stations 5734 and 5735. The loss of volume southward, both inside the triangle and between the triangle and the section across the Labrador Sea, is in accord with the reports of exceptional numbers of bergs south-southeastward of Cape Farewell. As suggested above, perhaps even more than the estimated 0.6 moved southward and eastward south of the triangle.

In considering the temperature sections forming the three sides of the triangle (figs. 27, 29, and 31), it will be noted that the temperature structure in the vicinity of Cape Farewell is markedly different in

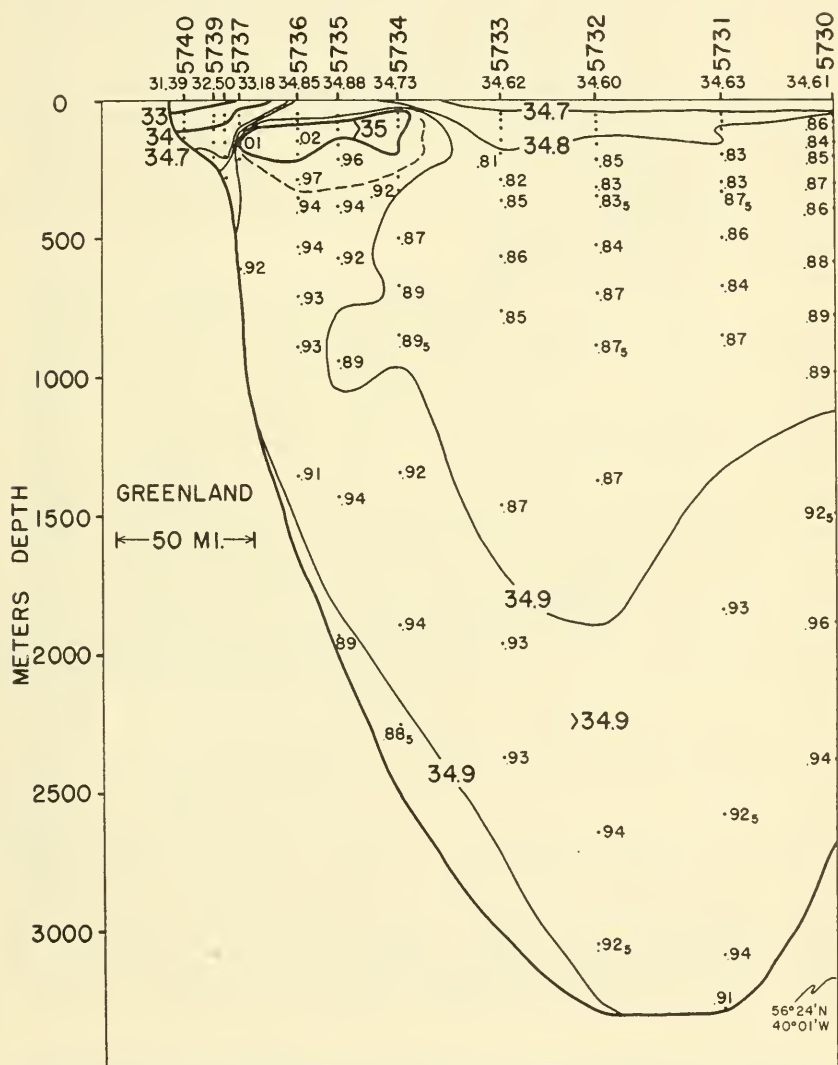


FIGURE 32.—Salinity distribution southeast of Cape Farewell, Greenland, 2-4 September 1954.

figures 27 and 31. In these two sections the deep water with temperatures of less than 3.2° is recognizably similar. Above this the intermediate water has but slight gradients between temperatures of 3.2° and 3.5° . In figure 31 there appears a poorly developed temperature minimum, with temperatures of between 3.25 and 3.3, which is similar to that found in the section across the Labrador Sea and it is probable that it is related to the Labrador Sea minimum in its formation. In the northern side of the triangle (fig. 27) such a minimum is hinted at, but the temperatures here are about 0.1° higher.

Figures 28, 30, and 32, showing the salinity distribution along the three sides of the triangle, all show a minimum with salinities of less than 34.90‰ in the intermediate water with an underlying maximum greater than 34.90‰ in the deep water. In figures 28 and 32 this maximum is connected along the continental slope with the maximum associated with the Irminger Current. Here the highest observed salinities were 35.055 and 35.04‰ in the north and southwest sections, respectively. These are of the magnitude found in the section extending southwest from Cape Farewell in the prewar years and not found there since 1949.

In the hope that the concentration of total phosphorus might be useful as a water-mass tracer in the vicinity of southern Greenland, samples were taken from all levels at most of the stations during the May survey of the Grand Banks region in 1952 and characteristic phosphorus-density curves were derived from this survey for each of the three water masses (Labrador Current water, mixed water, and Atlantic Current water) present in that region. Samples were also taken from all levels at all stations comprising the South Wolf Island-Cape Farewell section in July 1952 and July 1953. The results of these observations have been reported in bulletin No. 39 of this series. In 1954 similar sampling was carried out during the occupation of the South Wolf Island-Cape Farewell section and the Greenland triangle. The results of the 1954 phosphorus determinations are tabulated at the end of the usual table of oceanographic data, and the phosphorus distribution has been shown graphically in figures 33 to 36. In each of these figures isentropic surfaces of equal potential density³ have been shown as solid lines. In the South Wolf Island-Cape Farewell section (fig. 33), the phosphorus concentration shows very little variation at depths greater than 50 meters. There is a slight maximum at intermediate depths along the outer part of the Labrador Current and a somewhat greater maximum similarly located along the offshore part of the West Greenland Current. Elsewhere the range is for the most part between 1.1 and 1.3 microgram-atoms per liter. Some slight instabilities are present and the course of the 1.2

³ $\sigma_{t\theta}$, where $t\theta$ is the temperature a water particle would have if its pressure were reduced adiabatically to atmospheric pressure, and where $s_{t\theta}$ is 1,000 (density -1) at atmospheric pressure and temperature $t\theta$.

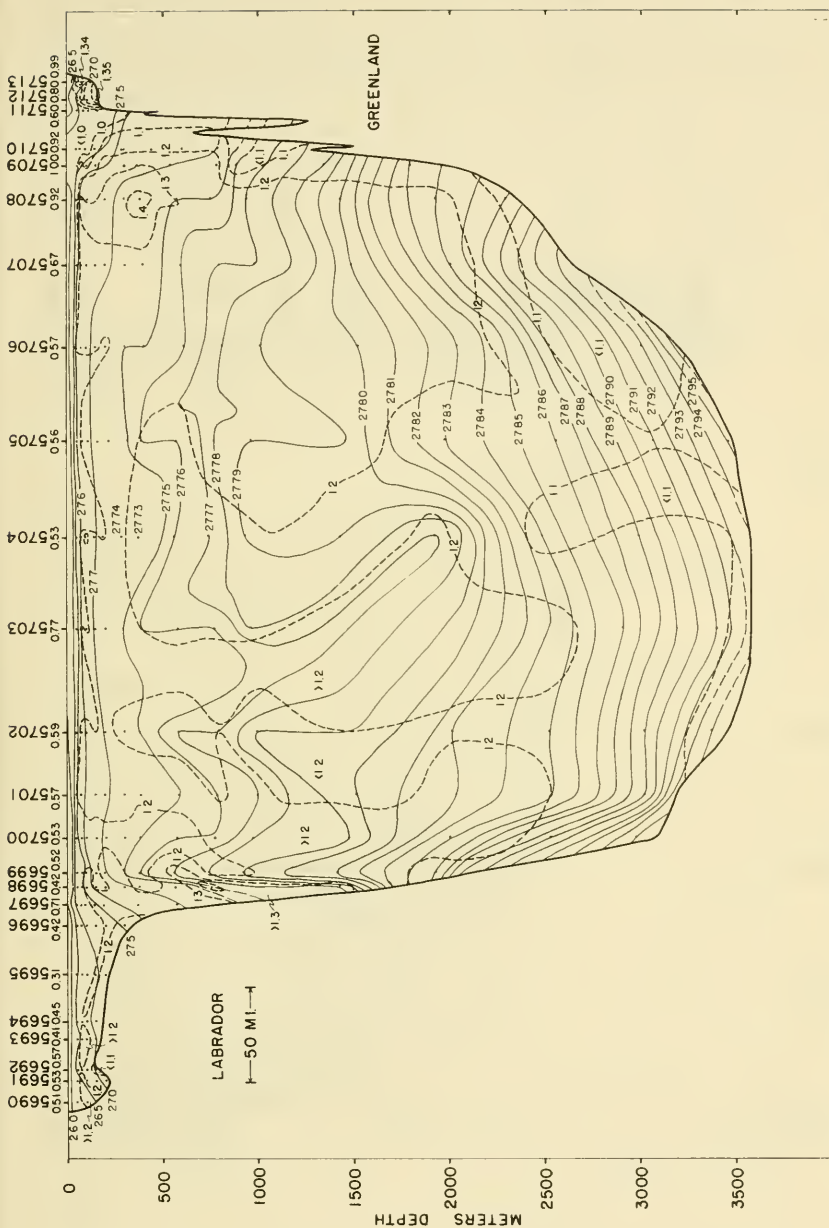


Figure 33.—Distribution of total phosphorus between South Wolf Island, Labrador, and Cape Farewell, Greenland, 25-29 August 1954. Concentration is given in microgram-atoms per liter. Solid lines show isentropic surfaces of equal σ_{tp} .

phosphorus line seems to show a correspondence with the distortions of the density pattern.

Figure 34 shows a more complicated pattern with higher phosphorus concentrations and in the intermediate water a split maximum with values in excess of $1.5 \mu\text{ga/L}$. As in figure 33 the phosphorus concentration decreases toward the bottom. In figures 35 and 36 the southern corner of the triangle is seen to be in a phosphorus maximum, while figure 36 shows a slight maximum at intermediate depths at about station 5735 and another farther inshore at station 5738.

When individual station curves were drawn with total phosphorus concentration plotted against potential density, those in the Labrador

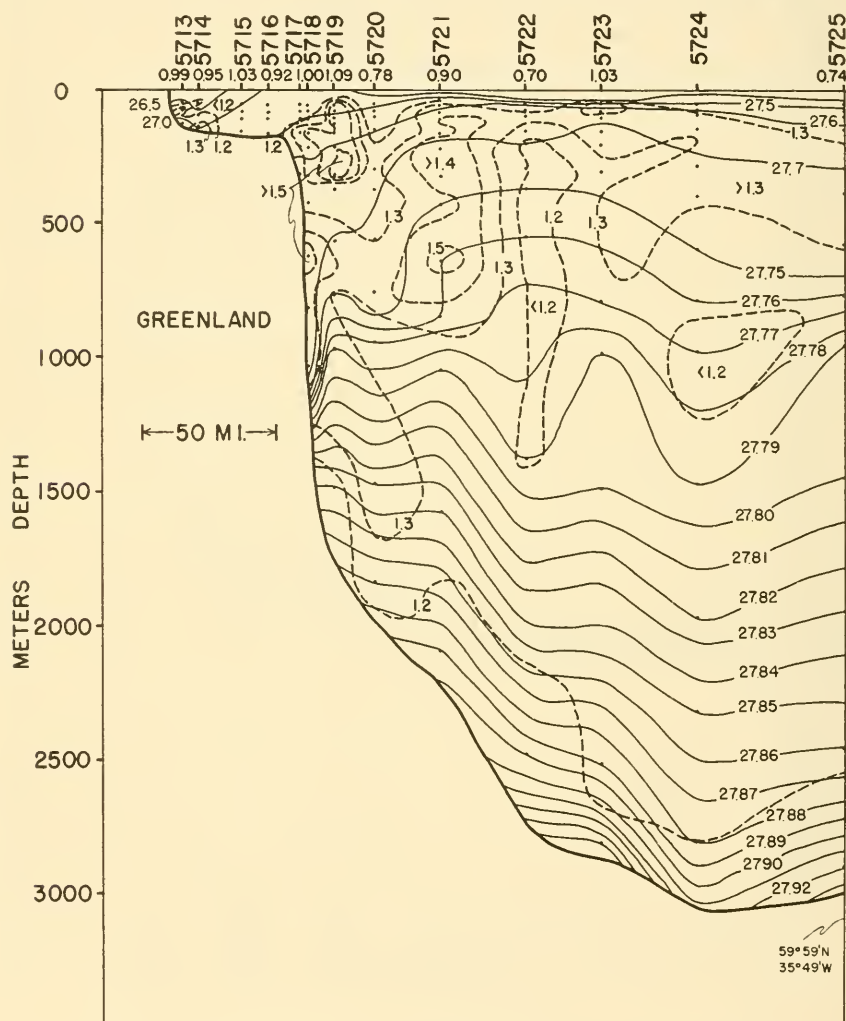


FIGURE 34.—Distribution of total phosphorus east of Cape Farewell, Greenland, 29-31 August 1954. Concentration is given in microgram-atoms per liter. Solid lines show isentropic surfaces of equal σ_{tg} .

Current off South Wolf Island fell into a group the mean curve for which is shown in figure 37 beginning at a phosphorus concentration of less than $0.6\mu\text{ga/L}$ near the surface, increasing to about 1.15 at about 26.60 and continuing constant at that value in greater densities. This was about 0.15 higher in phosphorus than found for the Labrador Current in the Grand Banks region in 1952 and off South Wolf Island in July 1953, and about 0.15 lower than found off South Wolf in July 1952. The stations in the central Labrador Sea fell into

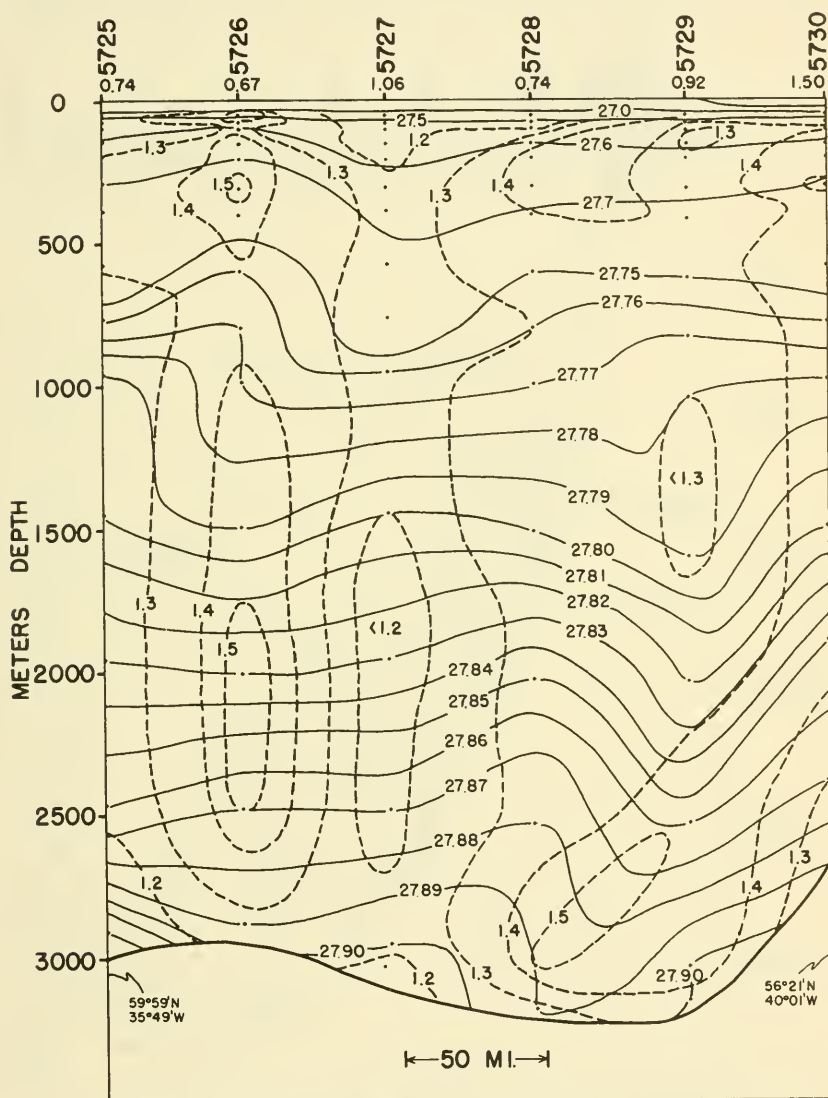


FIGURE 35.—Distribution of total phosphorus along offshore leg of Greenland triangle 31 August–2 September 1954. Concentration is given in micro-atoms per liter. Solid lines show isentropic surfaces of equal σ_t .

another group the mean curve for which is shown in figure 37. This has a shape similar to that found for the mixed water in the Grand Banks region in 1952, but 0.1 to 0.2 poorer in phosphorus. It was also poorer in phosphorus than the central Labrador Sea in 1952 and similar to that found in 1953. In the stations southwest of Cape Farewell, only 5712 and 5713 departed from this central Labrador Sea group and they were richer in phosphorus. Except for the 25- and 50-meter values at station 5712, these two stations fell into the group from the Greenland triangle representative of the East Greenland

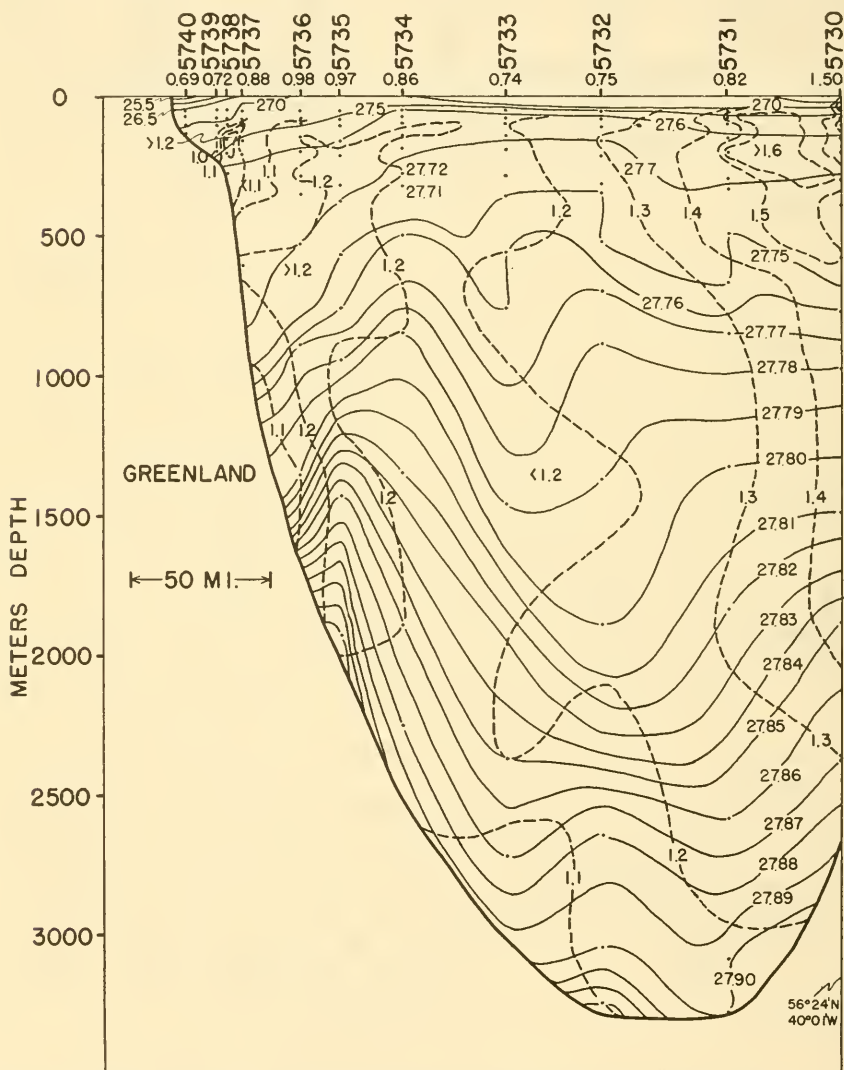


FIGURE 36.—Distribution of total phosphorus southeast of Cape Farewell, Greenland, 2-4 September 1954. Concentration is given in microgram-atoms per liter. Solid lines show isentropic surfaces of equal σ_{tg} .

Current water. This group was richer in phosphorus and similar to that for the Labrador Current in the density range common to both, and below which the high phosphorus Greenland triangle group increased to about 1.45 at 27.60 and then decreased slightly with increasing density. The other observations from the Greenland triangle fell into a low phosphorus group, shown in figure 37, similar in phosphorus-density relationship to the observations from the central Labrador Sea and only slightly higher in phosphorus.

The phosphorus values at all the locations in the Greenland triangle where the salinity was 35‰ or greater were examined and it was found that except for station 5719 these fell in the low phosphorus group. Water with salinities as great as this must have come from

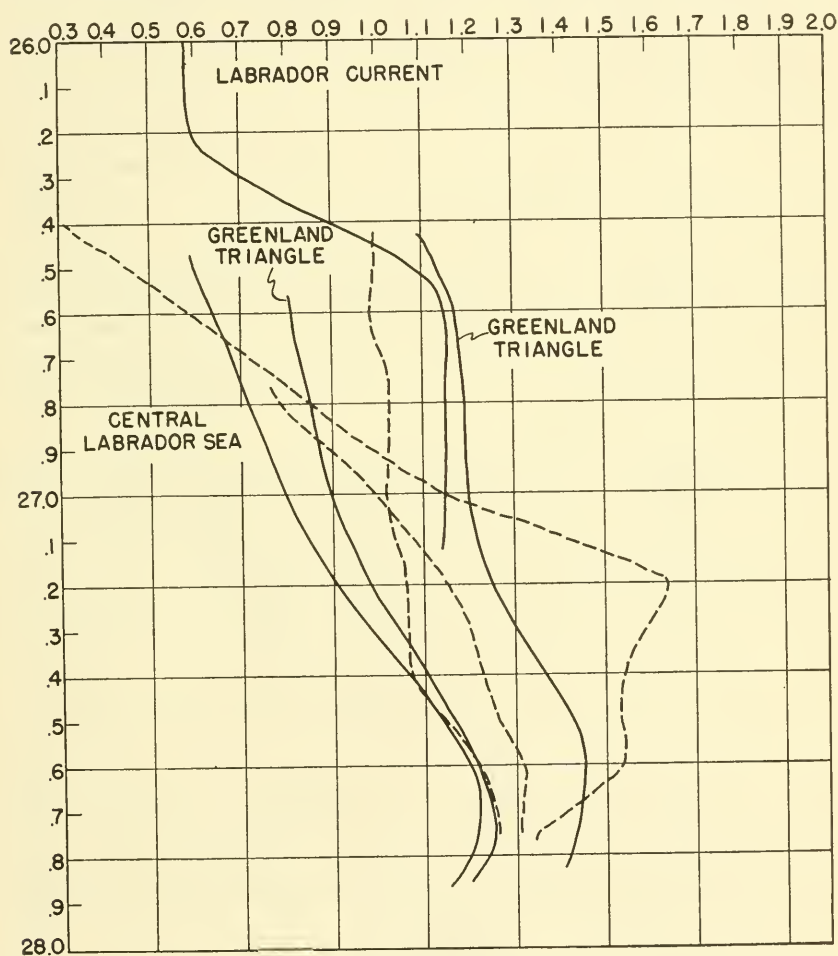


FIGURE 37.—Mean curves showing the relationship between total phosphorus concentration and potential density found in the South Wolf Island-Cape Farewell section and the Greenland triangle in 1954. Broken lines show the characteristic phosphorus-density curves for water masses found in the Grand Banks region in May 1952.

the North Atlantic eddy, either directly from its outer margins or indirectly such as by way of the Irminger Current. In the case of the salinity maximum water in the West Greenland Current, it is believed to have come from the outer margins of the North Atlantic eddy directly with some admixture of recirculating water of the Labrador Sea. In the case of the higher salinity maximum water in the Greenland triangle, its source is believed to have been the Irminger Current. If this is true then the high phosphorus values found at station 5719 were undergoing rapid depletion and had reached the level of the low phosphorus group by the time this water reached the southwestern side of the triangle. Total phosphorus, then, could be of little use as an indicator of the source of the salinity maximum water found in the West Greenland Current. When the location of the observations which form the high phosphorus group is considered, we find they are spottily present along the inshore half of the northern section to intermediate depths, present at one level only at station 5748 and present to all depths at the southern end of the triangle and weaving in and out of the southeastern section. Keeping in mind the similarity between the high phosphorus curve and the Grand Banks Atlantic Current curve at their deeper ends, the possibility is suggested that the high phosphorus water at the southern end of the triangle and along the southeastern side is supplied by the North Atlantic eddy in the deeper levels. This would mean that the high phosphorus curve for the Greenland triangle is a composite made up of the phosphorus characteristics of waters contributed by the Atlantic Current and by the East Greenland Current.

The alternative explanation is that all of the high phosphorus water is supplied by the East Greenland Current. This accords with the limitation to intermediate depths at the north side where it first reaches the triangle and extending to all depths at the southern end and southeastern side which is farther downstream. The almost complete absence of high phosphorus water from the southwest side of the triangle (except the southern corner) contradicts this explanation. The Atlantic Current source of the high phosphorus water at the southern corner and in the southeastern side is contradicted by the low salinities in the upper 1,000 meters. The choice therefore, is not clear cut and the authors have relied on the distribution of density, temperature, and salinity in deducing the circulation, and have considered that the total phosphorus concentration may be too much affected by transient additions from the erratic migrations of the sea's flora and fauna and their associated detritus to be a reliable tracer of water masses.

SUMMARY

1. The surface circulation in the Grand Banks region during the 1954 ice patrol season has been discussed on the basis of four dynamic topographic surveys made between 1 April and 2 July.

2. The circulation in the upper 1,000 meters has been presented in greater detail based on the consideration of the volume transport, mean temperature, minimum temperature, and heat transport of the Labrador Current found during 19 occupations of 8 selected sections across that current. The values found have been compared with seasonal normals where such normals are available.

3. The temperature-salinity relationship characteristic of Labrador Current water, mixed water, and Atlantic Current water found in the Grand Banks region in 1954 have been compared with the 8-year means for the period 1934-41.

4. Three more surveys were added to the material available for the study of the relationship between the position of the cold wall in the Grand Banks region, the strength of the Labrador Current and the strength of the North Atlantic eddy as indicated by the difference in sea level between Bermuda and Charleston. The large postwar fluctuations in the mean sea level of these stations have been noted as possible causes of the poor agreement of postwar observations with the relationship developed for the prewar observations.

5. The repetition of the section across the Labrador Sea from South Wolf Island to Cape Farewell, Greenland, has been reported upon and the exceptionally vigorous circulation noted. The absence of contributions to the West Greenland Current by the Irminger Current continued in 1954 although the heat transport of the West Greenland Current was abnormally high through more direct contributions from the North Atlantic eddy.

6. A group of three sections disposed in a triangular array southeast of Cape Farewell and occupied during the 1954 postseason cruise has been examined and the results presented. The southward and eastward recurvature of the Irminger Current and a part of the East Greenland Current verifies the circulation pattern deduced from the Labrador Sea section, and the separation of the Labrador Sea from the circulation east of Cape Farewell is in accord with the larger numbers of East Greenland bergs recently found in positions exceptionally far to the south-southeast of Cape Farewell.

7. The distribution of total phosphorus found in the section across the Labrador Sea and the Greenland triangle in 1954 has been presented and the phosphorus-density relationships found have been examined, leading to the conclusion that total phosphorus is not sufficiently conservative to be useful as a water mass tracer in this region.

The data collected during 1954 are tabulated below. The individual station headings give the station number, date, geographical position, depth of water, and the dynamic height of the sea surface used in the construction of the dynamic topographic charts shown in figures 15, 16, 18, 19, 20, and 24. The depths of water are rough approximations, being uncorrected sonic soundings based on a sound-

ing velocity of 800 fathoms per second and containing an additional mechanical speed error of about 1/60. Where the depths of scaled values are enclosed in parentheses, the data are based on extrapolated vertical distribution curves of temperature or salinity or both. Asterisks appearing before observed temperatures indicate that these temperatures were determined from the depth of reversal and the corrected reading of an unprotected thermometer. The symbol σ_t signifies 1,000 (density—1) at atmospheric pressure and temperature t .

Table of Oceanographic Data
STATIONS OCCUPIED IN 1954

Observed values			Scaled values				σ_t	Observed values			Scaled values				σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters		Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰			
Station 5301, Apr. 1; latitude 41°36' N., longitude 47°16' W.; depth 4,189 m.; dynamic height 971.050															
0	8.30	33.56	0	8.30	33.56	26.12	17	-0.44	32.87	0	-0.10	32.87	26.41		
25	7.98	33.58	25	7.98	33.58	26.19	18	-0.46	32.88	25	-0.50	32.87	26.43		
50	5.15	33.58	50	5.15	33.58	26.55	39	-0.44	32.92	50	-0.70	33.05	26.59		
75	2.99	33.70	75	2.99	33.70	26.87	62	-0.93	33.20	75	-0.75	33.28	26.77		
100	2.65	33.88	100	2.65	33.88	27.04	83	-0.65	33.33	100	-0.40	33.39	26.85		
150	4.19	34.30	150	4.19	34.30	27.23	128	0.00	33.51	150	0.40	33.65	27.02		
200	5.41	34.63	200	5.41	34.63	27.35	337	4.91	34.70	200	1.50	34.02	27.25		
300	5.73	34.91	300	5.73	34.91	27.54	498	4.09	34.82	300	4.05	34.60	27.48		
409	5.13	34.89	400	5.20	34.89	27.58	657	4.29	34.935	400	4.60	34.75	27.54		
605	4.57	34.95	600	4.55	34.95	27.71	839	3.97	34.92	600	4.25	34.90	27.70		
796	4.29	34.98	800	4.30	34.98	27.75	1,327	3.58	34.91	800	4.00	34.92	27.75		
998	4.01	34.96	1,000	4.00	34.96	27.78				1,000	3.85	34.92	27.76		
1,507	3.57	34.93													
Station 5302, Apr. 1; latitude 41°56.5' N., longitude 47°55' W.; depth 3,658 m.; dynamic height 971.097															
0	12.74	35.08	0	12.74	35.08	26.53	0	-0.37	32.88	0	-0.37	32.88	26.43		
24	13.00	35.08	25	13.00	35.08	26.48	26	-0.43	32.88	25	-0.40	32.88	26.44		
48	13.09	35.14	50	13.10	35.14	26.50	51	-0.44	32.92	50	-0.45	32.92	26.47		
73	13.08	35.14	75	13.10	35.14	26.50	78	3.09	33.71	75	2.90	33.63	26.82		
97	14.03	35.76	100	14.00	35.75	26.78	103	4.01	33.95	100	3.90	33.90	26.94		
144	10.21	35.14	150	10.10	35.13	27.05	155	6.83	34.58	150	6.60	34.53	27.12		
193	9.37	35.10	200	7.95	35.08	27.36	206	7.61	34.79	200	7.55	34.77	27.18		
290	6.87	34.90	300	6.60	34.87	27.39	309	2.65	34.41	300	3.10	34.43	27.44		
352	5.24	34.75	400	5.15	34.81	27.53	381	2.40	34.44	400	2.55	34.47	27.53		
532	4.88	34.97	600	4.70	34.96	27.70	581	3.66	34.80	600	3.70	34.82	27.70		
713	4.30	34.95	800	4.15	34.93	27.73	790	3.63	34.88	800	3.65	34.88	27.74		
904	3.97	34.92	1,000	3.90	34.92	27.76	993	3.46	34.88	1,000	3.45	34.88	27.76		
1,403	3.55	34.92					1,509	3.41	34.87						
Station 5303, Apr. 1-2; latitude 42°19' N., longitude 48°33' W.; depth 3,182 m.; dynamic height 971.013															
0	4.62	33.02	0	4.62	33.02	26.17	0	4.99	33.03	0	4.99	33.03	26.14		
25	4.54	33.42	25	4.54	33.42	26.50	26	4.99	33.04	25	5.00	33.04	26.15		
50	4.71	33.60	50	4.71	33.60	26.62	51	3.87	33.52	50	3.90	33.51	26.64		
76	4.64	33.94	75	4.65	33.94	26.89	77	3.58	33.64	75	3.60	33.63	26.76		
100	5.56	34.21	100	5.56	34.21	27.01	102	3.14	33.86	100	3.15	33.85	26.97		
201	3.47	34.46	150	4.50	34.34	27.23	153	3.54	34.24	150	3.50	34.22	27.24		
301	4.61	34.76	200	3.45	34.45	27.42	204	3.74	34.50	200	3.75	34.48	27.41		
376	4.28	34.85	300	4.60	34.76	27.55	306	3.71	34.68	300	3.70	34.67	27.58		
575	4.44	34.96	400	4.30	34.87	27.67	399	4.67	34.92	400	4.70	34.92	27.67		
783	3.90	34.93	600	4.40	34.96	27.73	596	4.56	34.98	600	4.55	34.98	27.73		
991	3.64	34.90	800	3.90	34.93	27.76	791	3.99	34.93	800	4.00	34.93	27.75		
1,529	3.42	34.91	1,000	3.65	34.90	27.76	994	3.87	34.94	1,000	3.85	34.94	27.77		
							1,508	3.55	34.93						

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5307; Apr. 3; latitude 42°46.5' N., longitude 47°37' W.; depth 3,585 m.; dynamic height 971.223								Station 5311; Apr. 3-4; latitude 43°10' N., longitude 45°19' W.; depth 3,566 m.; dynamic height 971.491							
0	13.95	35.48		0	13.95	35.48	26.58	0	16.54	36.25		0	16.54	36.25	26.60
26	14.00	35.48		25	14.00	35.48	26.57	28	16.56	36.24		25	16.55	36.24	26.58
51	14.03	35.49		50	14.05	35.49	26.57	54	16.54	36.23		50	16.55	36.23	26.58
77	14.13	35.505		75	14.10	35.50	26.57	82	16.50	36.22		75	16.50	36.22	26.59
102	14.06	35.50		100	14.10	35.50	26.57	109	16.49	36.22		100	16.50	36.22	26.59
153	11.25	35.03		150	11.30	35.04	26.77	164	16.23	36.15		150	16.30	36.17	26.59
204	12.53	35.55		200	12.50	35.54	26.93	218	16.11	36.13		200	16.15	36.14	26.60
306	8.50	34.93		300	8.70	34.93	27.13	327	15.65	36.09		300	16.10	36.10	26.59
408	7.43	34.97		400	7.55	34.96	27.33	308	16.06	36.10		400	13.80	35.80	26.86
610	5.76	35.04		600	5.85	35.04	27.62	448	12.55	35.59		600	7.95	35.00	27.30
809	4.94	35.04		800	5.00	35.04	27.73	577	*8.13	35.00		800	6.20	35.00	27.55
1,013	4.22	34.97		1,000	4.25	34.97	27.76	699	7.39	35.02		1,000	4.40	34.95	27.72
1,530	3.62	34.915						958	4.71	34.96					
Station 5308; Apr. 3; latitude 42°37.5' N., longitude 46°54' W.; depth 4,024 m.; dynamic height 971.444								Station 5312; Apr. 4-5; latitude 43°19.5' N., longitude 46°00' W.; depth 4,427 m.; dynamic height 971.546							
0	15.99	36.00		0	15.99	36.00	26.55	0	16.49	36.21		0	16.49	36.21	26.59
25	15.99	36.00		25	15.99	36.00	26.54	25	16.62	36.21		25	16.62	36.21	26.56
50	15.98	36.00		50	15.98	36.00	26.54	50	16.57	36.22		50	16.57	36.22	26.57
75	15.99	36.00		75	15.99	36.00	26.54	74	16.57	36.21		75	16.55	36.21	26.57
100	15.99	36.00		100	15.99	36.00	26.54	99	16.55	36.21		100	16.55	36.21	26.57
150	16.00	36.00		150	16.00	36.00	26.54	148	16.31	36.17		150	16.30	36.17	26.59
200	16.01	36.00		200	16.01	36.00	26.53	198	16.31	36.17		200	16.30	36.17	26.59
300	*14.90	35.96		300	14.90	35.96	26.75	297	16.01	36.09		300	16.00	26.08	26.59
360	12.99	35.66		400	12.05	35.52	27.00	445	12.69	35.57		400	13.75	35.74	26.83
514	9.37	35.17		600	7.00	34.91	27.37	666	8.18	35.00		600	9.55	35.11	27.13
663	5.58	34.76		800	6.10	35.07	27.62	886	5.47	34.97		800	6.25	34.97	27.52
827	6.15	35.10		1,000	5.30	35.02	27.68	1,110	4.76	34.98		1,000	5.05	34.97	27.67
1,249	4.25	34.97						1,671	3.68						
Station 5309; Apr. 3; latitude 42°24' N., longitude 46°10' W.; depth 4,555 m.; dynamic height 971.596								Station 5313; Apr. 5; latitude 43°33' N., longitude 46°38' W.; depth 4,445 m.; dynamic height 971.388							
0	16.82	36.28		0	16.82	36.28	26.56	0	14.90	35.74		0	14.90	35.74	26.59
25	16.78	36.26		25	16.78	36.26	26.55	25	14.93	35.74		25	14.93	35.74	26.58
49	16.61	36.24		50	16.60	36.24	26.57	50	14.92	35.74		50	14.92	35.74	26.58
73	16.53	36.20		75	16.50	36.20	26.58	76	14.93	35.74		75	14.92	35.74	26.58
97	16.43	36.19		100	16.40	36.19	26.59	100	14.93	35.74		100	14.93	35.74	26.57
146	16.34	36.165		150	16.35	36.16	26.57	151	14.94	35.74		150	14.95	35.74	26.57
195	16.33	36.16		200	16.30	36.16	26.58	201	14.97	35.75		200	14.98	35.75	26.57
292	16.05	36.08		300	16.05	36.09	26.60	301	14.34	35.82		300	14.35	35.82	26.76
342	*16.25	36.14		400	15.30	35.99	26.68	321	13.88	35.79		400	11.35	35.40	27.04
513	12.85	35.64		600	10.95	35.38	27.10	478	8.79	35.06		600	6.90	35.02	27.47
684	9.13	35.16		800	7.25	35.07	27.46	634	6.56	35.02		800	5.35	35.02	27.67
862	6.59	35.05		1,000	5.50	35.03	27.65	811	5.33	35.02		1,000	4.55	34.99	27.74
1,319	4.36	34.98						1,285	3.79	34.92					
Station 5310; Apr. 3; latitude 42°44' N., longitude 45°48' W.; depth 4,572 m.; dynamic height 971.717								Station 5314; Apr. 5; latitude 43°45.5' N., longitude 47°06' W.; depth 4,061 m.; dynamic height 971.171							
0	16.97	36.32		0	16.97	36.32	26.55	0	13.53	35.43		0	13.53	35.43	26.64
24	16.99	36.32		25	17.00	36.32	26.54	27	13.55	35.43		25	13.55	35.43	26.64
47	16.99	36.32		50	17.00	36.32	26.54	54	13.54	35.43		50	13.55	35.43	26.64
70	17.00	36.31		75	17.00	36.31	26.53	82	13.55	35.43		75	13.55	35.43	26.64
93	17.01	36.31		100	17.00	36.31	26.53	108	13.55	35.43		100	13.55	35.43	26.64
141	17.01	36.31		150	17.00	36.31	26.53	163	12.47	35.47		150	12.80	35.46	26.81
188	16.96	36.30		200	17.00	36.29	26.52	217	10.99	35.33		200	11.50	35.39	27.00
281	16.99	36.24		300	16.90	36.22	26.49	325	7.65	34.89		300	8.40	34.98	27.21
355	16.44	36.17		400	16.00	36.13	26.63	426	5.98	34.86		400	6.35	34.86	27.42
533		35.99		600	13.50	35.83	26.95	635	4.60	34.92		600	4.70	34.91	27.66
712	*11.56	35.52		800	9.80	35.30	27.24	845	4.49	34.99		800	4.55	34.99	27.74
892	7.98	35.11		1,000	6.40	35.07	27.58	1,057	4.12	34.96		1,000	4.20	34.98	27.77
1,345	4.62	35.01						1,587	3.53	34.91					

*See lines 4, 5, 6, and 7 on p. 116.

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5315; Apr. 5; latitude 43°54' N., longitude 47°56' W.; depth 3,658 m.; dynamic height 970.972							Station 5319; Apr. 6; latitude 44°02' N., longitude 49°21' W.; depth 201 m.; dynamic height 971.132						
0	2.60	33.13	0	2.60	33.13	26.45	0	0.22	32.72	0	0.22	32.72	26.28
23	0.41	32.95	25	0.35	32.95	26.46	29	0.03	32.78	25	0.05	32.77	26.33
46	0.01	32.99	50	0.05	33.07	26.57	56	-0.31	32.86	50	-0.25	32.84	26.40
69	1.38	33.49	75	1.55	33.63	26.93	84	-0.62	32.92	75	-0.55	32.90	26.45
92	1.84	33.89	100	2.00	33.99	27.18	112	-0.72	33.08	100	-0.70	33.01	26.56
139	2.95	34.40	150	3.15	34.45	27.45	169	-0.41	33.31	150	-0.60	33.24	26.73
185		34.60	200	3.55	34.63	27.55				(200)	-0.05	33.43	26.86
277	3.81	34.71	300	3.85	34.74	27.61							
388	*3.89	34.85	400	3.90	34.85	27.70							
585	3.81	34.91	600	3.80	34.89	27.74							
786	3.79	34.89	800	3.80	34.89	27.74							
991	3.56	34.90	1,000	3.55	34.90	27.77							
1,514	3.43	34.91											
							Station 5320; Apr. 6; latitude 44°04' N., longitude 49°27' W.; depth 73 m.; dynamic height 971.143						
0			0				0	0.58	32.70	0	0.58	32.70	26.24
26			25				26	0.37	32.73	25	0.40	32.73	26.28
40			50				40	0.14	32.77	50	0.05	32.79	26.35
68							68	-0.09	32.83				
							Station 5321; Apr. 6; latitude 44°57' N., longitude 49°15' W.; depth 96 m.; dynamic height 971.177						
0	3.88	33.28	0	3.88	33.28	26.45	0	-0.27	32.86	0	-0.27	32.86	26.41
25	3.92	33.29	25	3.92	33.29	26.45	26	-0.28	32.86	25	-0.27	32.86	26.41
49	3.00	33.40	50	3.00	33.42	26.65	52	-0.31	32.87	50	-0.30	32.87	26.42
73	4.55	34.00	75	4.75	34.05	26.97	79	-0.34	32.87	75	-0.30	32.87	26.42
97	6.57	34.47	100	6.60	34.50	27.10							
147	6.20	34.61	150	6.15	34.61	27.25							
196	4.60	34.53	200	4.50	34.54	27.39							
293	3.57	34.64	300	3.60	34.66	27.58							
301	3.55	34.68	400	4.25	34.87	27.68							
473	4.72	35.00	600	4.30	34.92	27.71							
661	4.08	34.90	800	3.90	34.93	27.76							
846	3.83	34.93	1,000	3.70	34.92	27.78							
1,340	3.40	34.90											
							Station 5322; Apr. 6; latitude 44°55' N., longitude 49°07' W.; depth 512 m.; dynamic height 971.147						
0			0				0	-0.30	32.87	0	-0.30	32.87	26.42
24			25				24	-0.33	32.87	25	-0.30	32.87	26.42
48			50				48	-0.42	32.87	50	-0.45	32.87	26.43
73			75				73	-0.49	32.87	75	-0.50	32.87	26.43
97			100				97	-0.48	32.88	100	-0.50	32.89	26.44
145			150				145	-0.87	33.12	150	-0.85	33.15	26.66
193			200				193	-0.24	33.36	200	-0.10	33.42	26.86
290			300				290	1.31	34.02	300	1.40	34.04	27.27
397			400				397	1.67	34.18	400	1.70	34.19	27.36
							Station 5323; Apr. 6; latitude 44°53' N., longitude 48°59' W.; depth 914 m.; dynamic height 971.103						
0	-0.71	32.84	0	-0.71	32.84	26.42	0	-0.71	32.84	0	-0.71	32.84	26.42
27	-0.75	32.82	25	-0.75	32.82	26.40	27	-0.75	32.82	25	-0.75	32.82	26.40
54	-1.16	32.85	50	-1.15	32.84	26.43	54	-1.16	32.85	50	-1.15	32.84	26.43
81	-0.94	33.15	75	-0.95	33.09	26.62	81	-0.94	33.15	75	-0.95	33.09	26.62
108	-0.86	33.21	100	-0.90	33.19	26.71	108	-0.86	33.21	100	-0.90	33.19	26.71
163	0.63	33.70	150	0.25	33.57	26.97	163	0.63	33.70	150	0.25	33.57	26.97
217	1.40	34.04	200	1.25	33.96	27.21	217	1.40	34.04	200	1.25	33.96	27.21
325	1.59	34.12	300	1.60	34.10	27.30	325	1.59	34.12	300	1.60	34.10	27.30
364	1.58	34.16	400	1.90	34.27	27.42	364	1.58	34.16	400	1.90	34.27	27.42
555	3.45	34.78					555	3.45	34.78				
							Station 5318; Apr. 6; latitude 43°58.5' N., longitude 49°07' W.; depth 622 m.; dynamic height 971.094						
0	-0.80	32.86	0	-0.80	32.86	26.43	0	-0.80	32.86	0	-0.80	32.86	26.43
24	-0.82	32.865	25	-0.85	32.87	26.44	24	-0.82	32.865	25	-0.85	32.87	26.44
47	-0.84	32.88	50	-0.85	32.89	26.45	47	-0.84	32.88	50	-0.85	32.89	26.45
71	-1.17	32.98	75	-1.15	33.03	26.58	71	-1.17	32.98	75	-1.15	33.03	26.58
94	-0.85	33.24	100	-0.80	33.26	26.75	94	-0.85	33.24	100	-0.80	33.26	26.75
141	-0.26	33.38	150	-0.10	33.43	26.86	141	-0.26	33.38	150	-0.10	33.43	26.86
188	0.55	33.74	200	0.70	33.79	27.11	188	0.55	33.74	200	0.70	33.79	27.11
282	1.51	34.12	300	1.75	34.23	27.39	282	1.51	34.12	300	1.75	34.23	27.39
326	2.06	34.36	400	2.65	34.53	27.56	326	2.06	34.36	400	2.65	34.53	27.56
489	3.06	34.68	(600)	3.40	34.80	27.71	489	3.06	34.68	(600)	3.40	34.80	27.71

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5324; Apr. 6; latitude 44°49' N., longitude 48°48' W.; depth 1,829 m.; dynamic height 970.977								Station 5328; Apr. 7; latitude 44°35.5' N., longitude 46°26' W.; depth 3,658 m.; dynamic height 971.087							
0	-1.03	33.08		0	-1.03	33.08	26.61	0	10.16	34.50		0	10.16	34.50	26.55
28	-0.96	32.97		25	-0.95	32.98	26.53	20	10.35	34.52		25	10.30	34.53	26.55
55	-1.02	33.10		50	-1.00	33.05	26.59	41	10.29	34.56		50	10.90	34.75	26.62
83	2.79	33.89		75	2.00	33.69	26.94	62	12.00	35.02		75	12.65	35.30	26.71
110	2.03	33.96		100	2.25	33.93	27.11	82	12.84	35.39		100	11.35	35.19	26.88
166	1.72	34.23		150	1.75	34.15	27.33	123	9.43	34.90		150	9.20	34.96	27.07
221	2.75	34.50		200	2.40	34.40	27.48	165	9.03	35.00		200	7.70	34.82	27.20
331	3.45	34.68		300	3.30	34.63	27.58	247	5.78	34.64		300	6.25	34.89	27.45
410	3.76	34.81		400	3.75	34.80	27.67	219	6.89	34.73		400	5.35	34.91	27.58
605	3.53	34.88		600	3.55	34.88	27.75	315	6.28	34.94	(600)	4.50	34.91	27.68	
796	3.47	34.89		800	3.50	34.89	27.77	400	5.34	34.91	(800)	4.10	34.90	27.72	
998	3.35	34.88		1,000	3.35	34.88	27.77				(1,000)	3.80	34.90	27.75	
1,507	*3.40	34.89													
Station 5325; Apr. 6; latitude 44°48' N., longitude 48°32' W.; depth 2,286 m.; dynamic height 970.940								Station 5329; Apr. 8; latitude 44°26' N., longitude 45°49' W.; depth 3,841 m.; dynamic height 971.032							
0	0.47	33.21		0	0.47	33.21	26.66	0	3.06	33.37		0	3.06	33.37	26.60
27	0.41	33.22		25	0.45	33.22	26.67	29	3.01	33.37		25	3.00	33.37	26.61
53	0.77	33.36		50	0.70	33.33	26.74	56	2.94	33.38		50	2.95	33.38	26.61
79	1.93	33.91		75	1.75	33.82	27.07	84	2.78	33.34		75	2.85	33.35	26.60
105	2.76	34.20		100	2.65	34.16	27.27	112	1.59	33.56		100	2.05	33.46	26.77
159	3.20	34.47		150	3.10	34.43	27.44	169	2.02	33.98		150	1.90	33.85	27.08
211	4.16	34.72		200	4.00	34.68	27.55	225	2.22	34.20		200	2.15	34.10	27.26
316	4.34	34.88		300	4.35	34.87	27.67	337	4.60	34.96		300	3.95	34.74	27.60
428	4.20	34.93		400	4.25	34.93	27.72	404	4.27			400	4.30	34.92	27.71
632	3.88	34.91		600	3.95	34.91	27.74	602	4.26			600	4.30	34.93	27.71
830	3.55	34.90		800	3.60	34.90	27.77	872	3.96	34.94		800	4.10	34.94	27.75
1,042	3.44	34.90		1,000	3.45	34.90	27.78	1,004	3.73	34.92		1,000	3.75	34.92	27.77
1,582	3.30							1,537	3.31	34.89					
Station 5326; Apr. 7; latitude 44°42.5' N., longitude 48°04' W.; depth 3,329 m.; dynamic height 970.988								Sta. 5330; Apr. 8; latitude 44°18' N., longitude 45°16' W.; depth 3,658 m.; dynamic height 971.058							
0	-0.17	32.98		0	-0.17	32.98	26.51	0	6.82	34.02		0	6.82	34.02	26.69
24	-0.13	33.02		25	-0.15	33.03	26.55	27	6.64	34.04		25	6.65	34.04	26.73
48	-0.54	33.34		50	-0.55	33.35	26.82	53	6.63	34.04		50	6.65	34.04	26.73
72		33.53		75	0.20	33.55	26.95	80	6.70	34.04		75	6.70	34.04	26.72
96	0.83	33.78		100	0.90	33.81	27.12	106	8.32	34.68		100	8.00	34.58	26.96
144	1.47	34.08		150	1.65	34.13	27.32	160	6.82	34.62		150	6.95	34.62	27.15
192	4.56	34.62		200	4.50	34.62	27.45	212	6.69			200	6.70	34.71	27.25
288	3.02	34.59		300	3.05	34.60	27.58	318	7.08	34.95		300	7.05	34.93	27.37
287	3.04	34.59		400	4.05	34.80	27.64	442	4.94	34.92		400	5.60	34.93	27.56
432	4.26	34.84		600	4.00	34.91	27.74	657	4.46	34.99		600	4.55	34.97	27.73
579	3.99	34.91		800	3.70	34.89	27.75	869	4.04	34.96		800	4.20	34.97	27.77
729	3.80	34.90		1,000	3.50	34.88	27.76	1,086	3.73	34.925		1,000	3.85	34.94	27.77
1,115	3.37	34.87													
Station 5327; Apr. 7; latitude 44°38' N., longitude 47°14' W.; depth 3,695 m.; dynamic height 971.042								Station 5331; Apr. 8; latitude 44°47' N., longitude 45°19' W.; depth 4,115 m.; dynamic height 971.059							
0	3.47	33.07		0	3.47	33.07	26.32	0	9.71	34.68		0	9.71	34.68	26.77
26	2.34	33.01		25	2.35	33.01	26.38	28	9.53	34.64		25	9.55	34.64	26.76
52	6.31	33.85		50	6.20	33.83	26.62	55	9.36	34.63		50	9.40	34.63	26.78
78	3.94	33.79		75	4.05	33.79	26.83	83	8.57	34.55		75	8.85	34.56	26.82
104	3.73	33.99		100	3.75	33.95	27.00	110	7.80	34.56		100	8.05	34.55	26.93
157	5.71	34.48		150	5.50	34.46	27.21	166	10.03	35.17		150	9.40	35.03	27.09
208	3.41	34.31		200	3.70	34.32	27.30	222	7.15	34.78		200	8.20	34.93	27.20
312	4.77	34.78		300	4.70	34.73	27.51	332	6.66	34.98		300	6.80	34.94	27.42
401	4.54	34.85		400	4.60	34.85	27.62	431	5.23	34.94		400	5.60	34.95	27.58
603	4.28	34.93		600	4.30	34.93	27.71	644	4.45	34.98		600	4.55	34.97	27.73
808	4.10	34.95		800	4.15	34.95	27.75	857	4.03	34.93		800	4.15	34.94	27.74
1,017	3.76	34.92		1,000	3.75	34.92	27.77	1,075	3.77	34.94		1,000	3.85	34.94	27.77
1,551	3.45	34.92						1,624	3.41	34.91					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5332: Apr. 8; latitude 45°20' N., longitude 45°23' W.; depth 4,079 m.; dynamic height 971.096							Station 5336: Apr. 9; latitude 45°31' N., longitude 47°52' W.; depth 1,554 m.; dynamic height 970.922						
0	7.34	34.20	0	7.34	34.20	26.76	0	0.32	33.32	0	0.32	33.32	26.76
25	7.36	34.20	25	7.36	34.20	26.76	25	0.57	33.39	25	0.57	33.39	26.79
50	7.39	34.20	50	7.39	34.20	26.75	49	1.80	33.58	50	1.85	33.59	26.88
75	8.58	34.52	75	8.58	34.52	26.83	74	2.36	33.78	75	2.40	33.79	26.99
100	10.18	34.99	100	10.18	34.99	26.93	98	3.79	34.31	100	3.80	34.32	27.29
151	7.58	34.57	150	7.60	34.57	27.02	148	2.91	34.44	150	2.95	34.44	27.46
202	8.12	34.85	200	8.10	34.84	27.15	196	3.83	34.66	200	3.85	34.67	27.56
302	6.56	34.79	300	6.60	34.78	27.32	294	4.29	34.88	300	4.30	34.88	27.68
367	5.98	34.85	400	5.75	34.88	27.51	376	3.91	34.90	400	3.85	34.90	27.74
553	4.93	34.95	600	4.75	34.95	27.68	566	3.66	34.905	600	3.65	34.90	27.76
741	4.33	34.95	800	4.25	34.95	27.74	758	3.53	34.895	800	3.55	34.90	27.77
933	4.05	34.95	1,000	4.00	34.95	27.77	959	3.38		1,000	3.40	34.90	27.79
1,424	3.65	34.92					1,374	3.32	34.89				
Station 5333: Apr. 9; latitude 45°20' N., longitude 46°00' W.; depth 3,466 m.; dynamic height 970.963							Station 5337: Apr. 9; latitude 45°38.5' N., longitude 48°16' W.; depth 631 m.; dynamic height 970.987						
0	3.58	33.71	0	3.58	33.71	26.82	0	-1.32	33.02	0	-1.32	33.02	26.58
22	3.58	33.71	25	3.60	33.71	26.82	24	-1.31	33.02	25	-1.30	33.02	26.58
45	3.56	33.72	50	3.55	33.73	26.84	48	-1.35	33.06	50	-1.35	33.08	26.63
68	3.56	33.73	75	3.55	33.73	26.84	72	0.03	33.65	75	0.35	33.70	27.06
91	3.57	33.72	100	3.60	33.76	26.86	96	1.11	33.98	100	1.20	34.00	27.25
135	3.60	34.00	150	3.70	34.12	27.14	144	1.74	34.18	150	1.80	34.19	27.36
180	3.86	34.39	200	3.95	34.52	27.43	192	1.92	34.26	200	1.95	34.27	27.42
271	4.13	34.81	300	4.05	34.84	27.67	288	2.16	34.42	300	2.20	34.43	27.52
332	3.95	34.85	400	3.80	34.87	27.73	355	2.52	34.49	400	2.90	34.55	27.56
503	3.65	34.90	600	3.60	34.90	27.77	552	3.57	34.84	(600)	3.60	34.86	27.74
679	3.50	34.90	800	3.45	34.90	27.78							
872	3.37	34.90	1,000	3.55	34.90	27.79							
1,396	3.32	34.90											
Station 5334: Apr. 9; latitude 45°23' N., longitude 46°41' W.; depth 3,072 m.; dynamic height 970.937							Station 5338: Apr. 9; latitude 45°20' N., longitude 48°27' W.; depth 179 m.; dynamic height 971.063						
0	3.00	33.76	0	3.00	33.76	26.92	0	-1.11	32.92	0	-1.11	32.92	26.49
28	2.99	33.76	25	3.00	33.76	26.92	26	-1.11	32.92	25	-1.10	32.92	26.49
55	3.16	33.78	50	3.10	33.77	26.92	51	-1.41	33.00	50	-1.40	32.99	26.56
83	3.32	33.90	75	3.30	33.86	26.97	78	-0.84	33.25	75	-0.90	33.22	26.73
111	3.91	34.21	100	3.75	34.09	27.11	103	-0.13	33.51	100	-0.20	33.48	26.91
167	3.97	34.54	150	4.00	34.46	27.38	155	0.43	33.61	150	0.40	33.60	26.98
222	4.09	34.68	200	4.05	34.63	27.50							
333	4.36	34.88	300	4.30	34.83	27.64							
442	4.07	34.93	400	4.15	34.92	27.73							
653	3.67	34.92	600	3.75	34.92	27.77							
859	3.50	34.90	800	3.55	34.90	27.77							
1,078	3.37	34.90	1,000	3.45	34.90	27.78							
1,627	3.32	34.91											
Station 5335: Apr. 9; latitude 45°20.05' N., longitude 47°23' W.; depth 2,743 m.; dynamic height 970.962							Station 5339: Apr. 9; latitude 45°46.5' N., longitude 48°34' W.; depth 123 m.; dynamic height 971.082						
0	2.03	33.47	0	2.03	33.47	26.78	0	-0.96	32.85	0	-0.96	32.85	26.43
27	2.01	33.47	25	2.00	33.47	26.78	27	-0.98	32.86	25	-0.95	32.85	26.43
52	1.99	33.47	50	2.00	33.47	26.78	53	-1.30	32.94	50	-1.25	32.93	26.50
79	1.97	33.47	75	2.00	33.47	26.78	80	-1.42	33.03	75	-1.40	33.01	26.58
105	1.59	33.61	100	1.60	33.56	26.87	106	-1.01	33.12	100	-1.15	33.10	26.64
158	3.87	34.40	150	3.65	34.29	27.28							
210	4.12	34.70	200	4.10	34.67	27.54							
315	4.29	34.86	300	4.30	34.85	27.66							
436	4.15	34.91	400	4.20	34.90	27.71							
645	3.60	34.88	600	3.70	34.89	27.75							
849	3.48	34.90	800	3.50	34.90	27.78							
1,070	3.43	34.90	1,000	3.45	34.90	27.78							
1,600	3.31	34.90											
Station 5340: Apr. 9; latitude 45°53.5' N., longitude 48°46' W.; depth 98 m.; dynamic height 971.100							Station 5340: Apr. 9; latitude 45°53.5' N., longitude 48°46' W.; depth 98 m.; dynamic height 971.100						
0	0.65	32.70	0	0.65	32.70	26.24	0	0.65	32.70	0	0.65	32.70	26.24
26	0.62	32.71	25	0.65	32.71	26.25	26	0.62	32.71	25	0.65	32.71	26.25
53	-0.12	32.83	50	-0.05	32.82	26.37	53	-0.12	32.83	50	-0.05	32.82	26.37
79	-0.66	32.86	75	-0.60	32.86	26.42	79	-0.66	32.86	75	-0.60	32.86	26.42

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5341; Apr. 10; latitude 46°03.5' N., longitude 48°50' W.; depth 93 m.; dynamic height 971.107								Station 5347; Apr. 10; latitude 46°03' N., longitude 47°20' W.; depth 1,445 m.; dynamic height 970.900							
0	1.10	32.59		0	1.10	32.59	26.13	0	-0.49	33.33		0	-0.49	33.33	26.80
26	1.08	32.58		25	1.10	32.58	26.12	25	-0.51	33.32		25	-0.51	33.32	26.79
51	0.65	32.69		50	0.70	32.68	26.22	49	0.23	33.65		50	0.25	33.67	27.05
77	-0.14	32.94		75	-0.05	32.93	26.46	74	1.28	34.15		75	1.30	34.16	27.37
								98	1.57	34.26		100	1.60	34.26	27.43
								148	2.50	34.54		150	2.55	34.55	27.59
								197	2.88	34.64		200	2.90	34.64	27.63
								295	3.55	34.77		300	3.55	34.77	27.67
								421	3.79	34.86		400	3.75	34.85	27.71
								619	3.56	34.89		600	3.60	34.89	27.76
								812	3.42	34.885		800	3.45	34.88	27.76
								1,025	3.38	34.885		1,000	3.40	34.88	27.77
								1,350	3.36	34.88					
Station 5342; Apr. 10; latitude 46°12.5' N., longitude 48°56' W.; depth 82 m.; dynamic height 971.123								Station 5348; Apr. 10; latitude 45°59' N., longitude 46°36' W.; depth 531 m.; dynamic height 970.928							
0	1.28	32.50		0	1.28	32.50	26.04	0	3.43	33.82		0	3.43	33.82	26.92
25	1.28	32.50		25	1.28	32.50	26.04	24	3.47	33.81		25	3.45	33.81	26.91
45	1.27	32.47		50	1.25	32.48	26.03	48	3.45	33.82		50	3.45	33.82	26.92
65	1.26	32.48		(75)	1.25	32.49	26.03	72	3.62	33.91		75	3.65	33.91	26.97
								96	3.56	33.98		100	3.60	34.02	27.07
								145	3.87	34.51		150	3.95	34.56	27.46
								193	4.41	34.76		200	4.45	34.77	27.58
								289	4.13	34.89		300	4.15	34.90	27.71
								365	4.36	34.96		400	4.30	34.95	27.73
								504	3.70	34.90					
Station 5343; Apr. 10; latitude 46°10.5' N., longitude 48°26' W.; depth 100 m.; dynamic height 971.090								Station 5349; Apr. 10; latitude 45°55' N., longitude 45°56' W.; depth 2,816 m.; dynamic height 971.004							
0	0.28	32.82		0	0.28	32.82	26.36	0	7.76	34.26		0	7.76	34.26	26.75
26	0.25	32.82		25	0.25	32.82	26.36	26	7.82	34.28		25	7.80	34.28	26.75
53	-0.03	32.85		50	0.00	32.84	26.39	52	7.72	34.27		50	7.75	34.27	26.76
79	-0.23	32.88		75	-0.20	32.87	26.42	78	8.58	34.56		75	8.50	34.52	26.84
								104	8.34	34.77		100	8.40	34.76	27.04
								156	7.23	34.80		150	7.35	34.80	27.23
								208	6.52	34.86		200	6.65	34.85	27.37
								312	4.25	34.75		300	4.50	34.76	27.56
								400	4.67	34.93		400	4.70	34.93	27.67
								597	4.27	34.91		600	4.30	34.91	27.70
								794	3.89	34.94		800	3.90	34.94	27.77
								1,000	3.69	34.92		1,000	3.70	34.92	27.78
								1,529	3.36	34.89					
Station 5344; Apr. 10; latitude 46°08.5' N., longitude 48°11' W.; depth 115 m.; dynamic height 971.078								Station 5350; Apr. 10; latitude 45°59' N., longitude 45°18' W.; depth 3,292 m.; dynamic height 971.047							
0	-0.93	32.83		0	-0.93	32.83	26.41	0	9.12	34.56		0	9.12	34.56	26.78
25	-0.93	32.82		25	-0.93	32.82	26.41	26	9.16	34.57		25	9.15	34.57	26.78
52	-1.10	32.86		50	-1.10	32.85	26.44	53	9.13	34.58		50	9.15	34.58	26.78
77	-1.38	33.06		75	-1.40	33.05	26.60	79	9.14	34.61		75	9.15	34.60	26.80
104	-0.93	33.23		100	-1.00	33.21	26.73	105	7.69	34.69		100	7.90	34.67	27.05
								157	7.50	34.82		150	7.55	34.82	27.22
								209	7.09	34.81		200	7.20	34.81	27.26
								314	5.23	34.80		300	5.40	34.80	27.49
								414	4.69	34.90		400	4.75	34.90	27.64
								612	4.52	34.90		600	4.60	34.90	27.66
								806	3.69	34.82		800	3.75	34.82	27.69
								1,009	3.55	34.89		1,000	3.60	34.89	27.76
								1,522	3.30	34.85					
Station 5346; Apr. 10; latitude 46°05' N., longitude 47°34' W.; depth 604 m.; dynamic height 970.948								Station 5351; Apr. 10; latitude 45°59' N., longitude 45°18' W.; depth 3,292 m.; dynamic height 971.047							
0	-1.24	33.09		0	-1.24	33.09	26.63	0	9.12	34.56		0	9.12	34.56	26.78
25	-1.26	33.14		25	-1.26	33.14	26.67	26	9.16	34.57		25	9.15	34.57	26.78
49	0.07	33.63		50	0.10	33.65	27.03	53	9.13	34.58		50	9.15	34.58	26.78
74	1.10	33.92		75	1.10	33.93	27.20	79	9.14	34.61		75	9.15	34.60	26.80
99	1.28	33.98		100	1.30	33.99	27.23	105	7.69	34.69		100	7.90	34.67	27.05
148	1.79	34.19		150	1.80	34.20	27.37	157	7.50	34.82		150	7.55	34.82	27.22
197	1.95	34.34		200	1.95	34.35	27.48	209	7.09	34.81		200	7.20	34.81	27.26
296	2.82	34.64		300	2.85	34.65	27.64	314	5.23	34.80		300	5.40	34.80	27.49
397	3.43	34.82		400	3.45	34.82	27.72	414	4.69	34.90		400	4.75	34.90	27.64
580	3.54	34.84		600	3.55	34.84	27.72	612	4.52	34.90		600	4.60	34.90	27.66
								806	3.69	34.82		800	3.75	34.82	27.69
								1,009	3.55	34.89		1,000	3.60	34.89	27.76
								1,522	3.30	34.85					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5351; Apr. 11; latitude 46°03' N., longitude 44°38' W.; depth 3,603 m.; dynamic height 970.901								Station 5355; Apr. 11; latitude 46°41' N., longitude 44°51' W.; depth 172 m.; dynamic height 970.943							
0	3.33	33.95		0	3.33	33.95	27.04	0	3.57	33.88		0	3.57	33.88	26.95
24	3.36	33.94		25	3.35	33.94	27.03	25	3.28	33.88		25	3.28	33.88	26.98
50	3.30	33.95		50	3.30	33.95	27.04	50	3.11	33.92		50	3.11	33.92	27.04
74	3.10	34.02		75	3.10	34.02	27.12	74	2.89	33.95		75	2.90	33.95	27.08
100	2.99	34.21		100	3.00	34.22	27.29	99	2.80	33.99		100	2.80	33.99	27.12
149	3.06	34.51		150	3.10	34.50	27.50	149	2.87	34.09		150	2.90	34.09	27.19
198	3.23	34.64		200	3.25	34.64	27.59								
298	3.74	34.84		300	3.75	34.84	27.70								
386	3.76	34.86		400	3.75	34.86	27.72								
573	3.55	34.89		600	3.55	34.89	27.76								
756	3.41	34.89		800	3.40	34.89	27.78								
952	3.33	34.89		1,000	3.35	34.89	27.78								
1,454	3.29	34.91													
Station 5352; Apr. 11; latitude 46°21' N., longitude 44°43' W.; depth 2,195 m.; dynamic height 970.873								Station 5356; Apr. 11; latitude 46°48' N., longitude 44°51' W.; depth 153 m.; dynamic height 970.942							
0	4.07	34.15		0	4.07	34.15	27.12	0	3.77	33.88		0	3.77	33.88	26.93
26	4.08	34.18		25	4.10	34.18	27.14	26	3.50	33.91		25	3.50	33.91	26.99
52	3.90	34.20		50	3.95	34.20	27.18	51	3.48	33.91		50	3.50	33.91	26.99
78	3.81	34.22		75	3.85	34.22	27.21	77	3.22	33.93		75	3.25	33.93	27.02
104	3.57	34.45		100	3.60	34.40	27.37	102	3.18	33.98		100	3.20	33.97	27.07
154	3.59	34.64		150	3.60	34.63	27.55	148	3.79	34.35		(150)	3.80	34.36	27.32
206	3.77	34.80		200	3.75	34.79	27.66								
310	3.73	34.86		300	3.75	34.86	27.72								
399	3.69	34.885		400	3.70	34.88	27.74								
594	3.69	34.905		600	3.60	34.90	27.77								
786	3.46	34.90		800	3.55	34.90	27.77								
985	3.38	34.89		1,000	3.40	34.89	27.78								
1,489	3.30	34.885													
Station 5353; Apr. 11; latitude 46°30' N., longitude 44°48' W.; depth 732 m.; dynamic height 970.896								Station 5357; Apr. 11; latitude 46°47' N., longitude 44°58' W.; depth 174 m.; dynamic height 970.940							
0	3.28	33.96		0	3.28	33.96	27.05	0	4.13	33.90		0	4.13	33.90	26.91
26	3.22	33.95		25	3.25	33.95	27.04	26	3.65	33.91		25	3.65	33.91	26.97
51	3.32	34.06		50	3.30	34.05	27.12	52	3.64	33.91		50	3.65	33.91	26.97
77	3.47	34.24		75	3.45	34.23	27.24	77	3.51	33.98		75	3.55	33.97	27.03
103	2.87	34.26		100	2.90	34.25	27.32	103	3.59	34.14		100	3.60	34.12	27.15
153	2.94	34.49		150	2.95	34.47	27.49	155	3.46	34.34		150	3.45	34.32	27.32
205	3.11	34.60		200	3.10	34.59	27.57								
308	3.85	34.79		300	3.80	34.78	27.65								
379	3.83	34.88		400	3.80	34.88	27.73								
572	3.55	34.89		(600)	3.50	34.89	27.77								
Station 5354; Apr. 11; latitude 46°35' N., longitude 44°49' W.; depth 227 m.; dynamic height 970.919								Station 5358; Apr. 11; latitude 46°46.5' N., longitude 45°12' W.; depth 200 m.; dynamic height 970.950							
0	3.60	33.93		0	3.60	33.93	26.99	0	4.58	33.96		0	4.58	33.96	26.92
25	3.49	33.93		25	3.49	33.93	27.00	25	3.88	33.96		25	3.88	33.96	26.99
50	3.13	34.00		50	3.13	34.00	27.09	51	3.88	33.96		50	3.90	33.96	26.99
74	2.86	34.05		75	2.85	34.05	27.16	76	3.90			75	3.90	33.96	26.99
99	2.74	34.20		100	2.75	34.20	27.29	101	3.64	33.98		100	3.65	33.97	27.03
149	3.02	34.35		150	3.05	34.35	27.38	152	3.05	34.15		150	3.10	34.14	27.21
198	3.24	34.52		200	3.25	34.53	27.50	203	3.52	34.42		200	3.50	34.41	27.39
Station 5355; Apr. 11; latitude 46°44' N., longitude 45°54' W., depth 327 m.; dynamic height 970.925								Station 5359; Apr. 11; latitude 46°45' N., longitude 45°34' W.; depth 260 m.; dynamic height 970.950							
0	2.50	33.62		0	2.50	33.62	26.85	0	4.20	33.96		0	4.20	33.96	26.96
25	2.31			25	2.31			25	3.84	33.96		25	3.84	33.96	26.99
51	1.56	33.59		50	1.60	33.59	26.89	50	3.84	33.98		50	3.84	33.98	27.01
76	2.78	33.79		75	2.70	33.80	26.97	75	3.83	33.98		75	3.83	33.98	27.01
101	6.40	34.70		100	6.35	34.70	27.29	100	3.82	33.97		100	3.82	33.97	27.00
152	5.41	34.73		150	5.45	34.73	27.42	150	3.54	34.08		150	3.54	34.08	27.12
203	4.36	34.69		200	4.40	34.69	27.51	200	3.30	34.46		200	3.30	34.46	27.45
304	3.81	34.82		300	3.85	34.82	27.68	250	3.46	34.58					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5361; Apr. 11; latitude 46°44' N., longitude 46°19' W.; depth 640 m.; dynamic height 970.884							Station 5366; Apr. 12; latitude 46°45.5' N., longitude 48°05' W.; depth 119 m.; dynamic height 971.068						
0	1.30	33.61	0	1.30	33.61	26.93	0	-0.56	32.82	0	-0.56	32.82	26.39
25	1.40	33.63	25	1.40	33.63	26.94	27	-0.61	32.81	25	-0.60	32.82	26.39
49	1.55	33.66	50	1.60	33.66	26.95	53	-0.62	32.82	50	-0.60	32.82	26.39
74	3.06	34.26	75	3.10	34.27	27.32	81	-0.60	32.83	75	-0.60	32.83	26.40
98	3.31	34.50	100	3.35	34.51	27.48	107	-0.22	33.25	100	-0.35	33.11	26.61
148	3.51	34.65	150	3.55	34.65	27.57							
197	3.82	34.77	200	3.85	34.78	27.64							
295	3.83	34.88	300	3.85	34.88	27.72							
390	3.75	34.89	400	3.75	34.89	27.74							
580	3.59	34.90	600	3.60	34.90	27.77							
Station 5362; Apr. 12; latitude 46°44' W., longitude 46°40' W.; depth 1,188 m.; dynamic height 970.886							Station 5367; Apr. 12; latitude 46°48.5' N., longitude 48°40' W.; depth 91 m.; dynamic height 971.077						
0	-0.18	33.39	0	-0.18	33.39	26.84	0	0.34	32.80	0	0.34	32.80	26.34
26	0.00	33.53	25	0.00	33.52	26.94	28	0.22	32.80	25	0.25	32.80	26.35
51	0.54	33.81	50	0.55	33.79	27.12	55	0.16	32.80	50	0.20	32.80	26.35
77	1.66	34.17	75	1.55	34.15	27.34	83	0.16	32.80	75	0.15	32.80	26.35
102	2.14	34.37	100	2.10	34.35	27.46							
153	2.47	34.55	150	2.45	34.53	27.57							
204	3.92	34.65	200	2.90	34.64	27.63							
306	3.72	34.81	300	3.70	34.80	27.68							
398	3.70	34.88	400	3.70	34.88	27.74							
585	3.54	34.90	600	3.55	34.90	27.77							
764	3.47	34.89	800	3.45	34.89	27.77							
1,080	3.31	34.88	1,000	3.35	34.88	27.77							
Station 5363; Apr. 12; latitude 46°44' N., longitude 47°05' W.; depth 631 m.; dynamic height 970.950							Station 5368; Apr. 12; latitude 47°13.5' N., longitude 49°13' W.; depth 89 m.; dynamic height 971.079						
0	-1.23	33.15	0	-1.23	33.15	26.68	0	-0.07	32.84	0	-0.07	32.84	26.39
27	-1.12	33.24	25	-1.10	33.24	26.75	29	-0.07	32.86	25	-0.05	32.86	26.40
53	-0.98	33.32	50	-1.00	33.31	26.80	56	-0.10	32.86	50	-0.10	32.86	26.40
80	0.45	33.79	75	0.15	33.68	27.05	85	-0.20	32.85	75	-0.15	32.85	26.40
107	0.97	34.02	100	0.85	33.97	27.25							
161	1.62	34.28	150	1.50	34.24	27.42							
214	2.25	34.46	200	2.10	34.42	27.52							
321	2.69	34.62	300	2.60	34.60	27.62							
402	2.77	34.66	400	2.80	34.66	27.65							
581	3.46	34.84	600	3.45	34.85	27.74							
Station 5364; Apr. 12; latitude 46°44' N., longitude 47°16' W.; depth 308 m.; dynamic height 970.992							Station 5369; Apr. 12; latitude 47°14' N., longitude 48°39' W.; depth 128 m.; dynamic height 971.073						
0	-1.39	32.98	0	-1.39	32.98	26.55	0	-0.90	32.85	0	-0.90	32.85	26.43
25	-1.45	33.06	25	-1.45	33.06	26.61	19	-0.90	32.85	25	-0.95	32.85	26.43
50	-1.48	33.12	50	-1.48	33.12	26.66	46	-1.20	32.83	50	-1.20	32.83	26.42
75	-1.42	33.24	75	-1.42	33.24	26.76	73	-1.18	32.86	75	-1.15	32.87	26.45
100	0.31	33.76	100	0.31	33.76	27.11	100	-0.80	33.04	100	-0.80	33.04	26.58
150	1.40	34.08	150	1.40	34.08	27.30	112	-0.39	33.26				
199	1.97	34.33	200	1.95	34.33	27.46							
299	2.25	34.46	300	2.25	34.46	27.54							
Station 5365; Apr. 12; latitude 46°45.5' N., longitude 47°37' W.; depth 183 m.; dynamic height 971.055							Station 5370; Apr. 12; latitude 47°13' N., longitude 48°08' W.; depth 169 m.; dynamic height 971.066						
0	-1.35	32.81	0	-1.35	32.81	26.41	0	-0.90	32.85	0	-0.90	32.85	26.43
25	-1.39	32.81	25	-1.39	32.81	26.42	28	-0.90	32.87	25	-0.90	32.87	26.45
51	-1.42	32.83	50	-1.40	32.83	26.43	54	-1.31	32.88	50	-1.25	32.88	26.46
76	-1.46	32.93	75	-1.45	32.92	26.50	82	-1.36	32.92	75	-1.35	32.91	26.49
103	-1.51	33.09	100	-1.50	33.07	26.62	109	-0.98	33.14	100	-1.10	33.06	26.60
153	-0.01	33.44	150	-0.15	33.42	26.87	164	0.18	33.53	150	-0.10	33.46	26.89
Station 5371; Apr. 12; latitude 47°12.5' N., longitude 47°48' W., depth 229 m.; dynamic height 971.077													
0	-1.23	32.66	0	-1.23	32.66	26.29							
26	-1.26	32.69	25	-1.25	32.69	26.31							
52	-1.28	32.84	50	-1.25	32.83	26.42							
78	-1.40	32.88	75	-1.40	32.87	26.46							
104	-1.04	33.09	100	-1.10	33.05	26.60							
157	-0.47	33.30	150	-0.55	33.27	26.75							
209	0.85	33.71	200	0.65	33.64	26.99							

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5372; Apr. 12; latitude 47°13.5' N., longitude 47°24' W.; depth 570 m.; dynamic height 970.970								Station 5377; Apr. 13; latitude 47°22' N., longitude 45°15' W.; depth 224 m.; dynamic height 970.932							
0	-1.31	33.06		0	-1.31	33.06	26.61	0	4.08	34.01		0	4.08	34.01	27.01
24	-1.50	33.07		25	-1.50	33.07	26.62	26	4.06	34.00		25	4.05	34.01	27.02
48	-1.60	33.10		50	-1.60	33.10	26.65	52	4.05	34.01		50	4.05	34.01	27.02
72	-1.59	33.13		75	-1.55	33.14	26.68	78	4.05	34.01		75	4.05	34.01	27.02
96	-0.91	33.35		100	-0.75	33.48	26.93	104	4.06	34.03		100	4.05	34.02	27.03
144	1.37	34.13		150	1.45	34.22	27.41	157	3.93	34.33		150	3.90	34.29	27.25
192	1.80	34.32		200	1.85	34.34	27.47	209	4.12	34.64		200	4.10	34.59	27.47
288	2.44	34.58		(300)	2.50	34.61	27.64								
				(400)	3.20	34.80	27.73								
Station 5373; Apr. 13; latitude 47°18' N., longitude 46°46' W.; depth 1,046 m.; dynamic height 970.889								Station 5378; Apr. 13; latitude 47°22' N., longitude 45°00' W.; depth 216 m.; dynamic height 970.942							
0	-0.40	33.23		0	-0.40	33.23	26.72	0	3.88	33.94		0	3.88	33.94	26.97
27	0.97	33.96		25	0.95	33.90	27.18	24	3.85	33.94		25	3.85	33.94	26.98
52	1.24	34.04		50	1.20	34.03	27.27	47	3.75	33.94		50	3.75	33.94	26.99
79		33.25		75	2.10	34.21	27.35	71	3.73	33.94		75	3.75	33.94	26.99
104	3.23	34.45		100	3.15	34.43	27.43	95	3.72	33.94		100	3.75	33.95	27.00
158	2.89	34.56		150	2.95	34.54	27.54	142	3.82	34.20		150	3.80	34.25	27.23
210	2.32			200	2.40	34.64	27.67	189	3.82	34.46		(200)	3.85	34.51	27.43
314	3.70	34.86		300	3.55	34.83	27.71								
344	3.80	34.88		400	3.80	34.87	27.73								
522	3.58	34.86		600	3.50	34.87	27.76								
702	3.43	34.88		800	3.45	34.88	27.76								
894	3.35	34.87		(1,000)	3.35	34.87	27.77								
Station 5374; Apr. 13; latitude 47°19' N., longitude 46°27' W.; depth 531 m.; dynamic height 970.880								Station 5379; Apr. 13; latitude 47°29' N., longitude 45°15' W.; depth 243 m.; dynamic height 970.927							
0	0.51	33.56		0	0.51	33.56	26.94	0	4.09	34.01		0	4.09	34.01	27.01
24	0.47	33.56		25	0.50	33.56	26.94	27	4.09	34.00		25	4.10	34.00	27.00
47	0.59	33.66		50	0.70	33.74	27.07	53	3.77	33.98		50	3.80	33.98	27.01
71	3.21	34.36		75	3.25	34.37	27.38	80	3.81	33.99		75	3.80	33.99	27.02
94	3.11	34.43		100	3.00	34.44	27.46	105	3.85	33.99		100	3.85	33.99	27.02
141	2.42	34.52		150	2.45	34.54	27.58	159	4.85	34.54		150	4.75	34.44	27.28
188	2.96	34.64		200	3.15	34.67	27.63	212	4.11	34.64		200	4.25	34.62	27.48
282	3.98	34.86		300	3.90	34.87	27.72								
362	3.72	34.90		400	3.70	34.90	27.76								
506	3.58	34.90													
Station 5375; Apr. 13; latitude 47°20' N., longitude 45°57' W.; depth 324 m.; dynamic height 970.933								Station 5380; Apr. 13; latitude 47°40' N., longitude 45°40' W.; depth 326 m.; dynamic height 970.895							
0	4.30	34.04		0	4.30	34.04	27.01	0	2.37	33.79		0	2.37	33.79	26.99
24	4.28	34.04		25	4.30	34.04	27.01	19	2.25	33.79		25	2.25	33.79	27.00
47	4.27	34.04		50	4.25	34.04	27.02	38	2.34	33.82		50	1.90	33.82	27.06
70	4.28	34.05		75	4.25	34.05	27.03	58	1.58	33.82		75	2.55	34.00	27.15
93	4.20	34.045		100	4.20	34.06	27.04	77	2.73	34.04		100	3.30	34.31	27.33
141	4.07	34.35		150	3.95	34.37	27.32	115	3.61	34.50		150	4.15	34.63	27.49
188	3.49	34.45		200	3.55	34.49	27.44	153	4.15	34.64		200	4.15	34.76	27.60
281	4.17	34.79		(300)	4.20	34.86	27.68	230	4.08	34.83		(300)	3.95	34.90	27.73
Station 5376; Apr. 13; latitude 47°21' N., longitude 45°32' W.; depth 263 m.; dynamic height 970.930								Station 5381; Apr. 13; latitude 47°43' N., longitude 45°47' W.; depth 439 m.; dynamic height 970.876							
0	3.99	33.97		0	3.99	33.97	26.96	0	1.73	33.80		0	1.73	33.80	27.05
27	4.09	34.02		25	4.10	34.02	27.02	27	1.68	33.80		25	1.70	33.80	27.05
53	4.38	34.075		50	4.35	34.07	27.03	52	1.63	34.05		50	1.65	34.02	27.24
80	4.38	34.07		75	4.35	34.07	27.03	79	2.32	34.28		75	2.20	34.25	27.38
106	4.42	34.085		100	4.40	34.08	27.03	104	3.23	34.49		100	3.10	34.44	27.45
159	3.77	34.38		150	3.85	34.32	27.29	157	4.13	34.71		150	4.10	34.69	27.55
212	4.91	34.74		200	4.70	34.68	27.47	210	4.12	34.78		200	4.15	34.77	27.61
249	4.52	34.77						314	3.77	34.87		300	3.80	34.86	27.72
								420	3.70	34.89		400	3.70	34.89	27.75

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t
Station 5382; Apr. 13; latitude 47°52.5' N., longitude 46°07' W.; depth 1,067 m.; dynamic height 970.842								Station 5386; Apr. 14; latitude 49°00' N., longitude 45°00' W.; depth 1,335 m.; dynamic height 970.817							
0	1.94	34.18		0	1.94	34.18	27.34	0	2.86	34.58		0	2.86	34.58	27.58
27	1.97	34.16		25	2.00	34.16	27.32	20	2.86	34.58		25	2.85	34.58	27.58
52	2.21	34.39		50	2.20	34.36	27.47	40	2.85	34.59		50	2.85	34.59	27.59
79	2.57	34.53		75	2.55	34.51	27.56	60	2.83	34.60		75	2.80	34.62	27.62
105	2.75	34.58		100	2.75	34.57	27.59	80	2.82	34.62		100	2.80	34.68	27.66
158	2.87	34.64		150	2.85	34.63	27.62	120	3.23	34.77		150	2.95	34.73	27.69
211	2.97	34.72		200	2.95	34.70	27.67	160	2.93	34.725		200	3.10	34.76	27.71
316	3.56	34.86		300	3.45	34.83	27.72	240	3.24	34.80		300	3.35	34.84	27.74
348	3.69	34.86		400	3.60	34.87	27.75	101	2.82	34.57		400	3.60	34.87	27.75
523	3.48	34.88		600	3.45	34.88	27.76	255	3.23	34.75		600	3.55	34.90	27.77
700	3.39	34.88		800	3.35	34.87	27.77	433	3.61	34.88		800	3.45	34.89	27.77
848	3.27	34.87		(1,000)	3.30	34.88	27.78	619	3.52	34.90		1,000	3.35	34.89	27.78
								1,117	3.27	34.88					
Station 5383; Apr. 13; latitude 47°58.5' N., longitude 46°20' W.; depth 1,165 m.; dynamic height 970.833								Station 5387; Apr. 14; latitude 49°10' N., longitude 45°40' W.; depth 2,213 m.; dynamic height 970.850							
0	0.83	33.71		0	0.83	33.71	27.04	0	4.26	34.44		0	4.26	34.44	27.33
24	0.82	33.74		25	0.80	33.76	27.08	26	4.25	34.45		25	4.25	34.45	27.34
47	2.22	34.43		50	2.30	34.45	27.53	52	3.55	34.48		50	3.65	34.48	27.42
71	2.56	34.56		75	2.55	34.56	27.60	78	2.89	34.53		75	2.90	34.52	27.54
94	2.60	34.56		100	2.65	34.56	27.59	103	3.26	34.68		100	3.20	34.66	27.62
142	3.42	34.76		150	3.50	34.68	27.60	156	3.49	34.78		150	3.45	34.77	27.68
190	3.70	34.83		200	3.70	34.84	27.71	207	3.65	34.84		200	3.65	34.83	27.70
284	3.74	34.88		300	3.70	34.88	27.74	310	3.49	34.85		300	3.50	34.85	27.74
292	3.70	34.87		400	3.65	34.89	27.75	381	3.43	34.855		400	3.45	34.85	27.74
447	3.59	34.90		600	3.45	34.88	27.76	570	3.44	34.85		600	3.45	34.85	27.74
622	3.43	34.88		800	3.35	34.89	27.78	762	3.41			800	3.45	34.85	27.74
810	*3.32	34.89		(1,000)	3.30	34.89	27.79	960	3.36	34.85		1,000	3.35	34.85	27.75
								1,470	3.32	34.91					
Station 5384; Apr. 14; latitude 48°19' N., longitude 45°54' W.; depth 1,174 m.; dynamic height 970.844								Station 5388; Apr. 14; latitude 49°19' N., longitude 46°21' W.; depth 2,963 m.; dynamic height 970.897							
0	2.47	34.40		0	2.47	34.40	27.47	0	5.39	34.55		0	5.39	34.55	27.29
25	2.47	34.41		25	2.47	34.41	27.48	26	5.38	34.54		25	5.40	34.54	27.28
48	2.50	34.40		50	2.50	34.40	27.47	52	5.40	34.55		50	5.40	34.55	27.29
73	2.64	34.42		75	2.65	34.42	27.48	78	5.40	34.56		75	5.40	34.56	27.30
96	3.04	34.58		100	3.05	34.58	27.56	103	5.41	34.56		100	5.40	34.56	27.30
145	2.76	34.60		150	2.80	34.61	27.61	156	5.11	34.71		150	5.15	34.69	27.43
194	3.80	34.79		200	3.80	34.79	27.66	208	5.11	34.87		200	5.10	34.86	27.57
290	3.72	34.86		300	3.40	34.82	27.73	311	4.43	34.88		300	4.45	34.88	27.66
317	3.10	34.765		400	3.45	34.84	27.73	389	4.07	34.88		400	4.00	34.88	27.71
498	3.46	34.87		600	3.45	34.88	27.76	581	3.64	34.90		600	3.65	34.90	27.76
682	3.42	34.88		800	3.40	34.88	27.77	771	3.51	34.895		800	3.50	34.89	27.77
873	3.36	34.88		(1,000)	3.35	34.88	27.77	970	3.41	34.88		1,000	3.40	34.88	27.77
								1,482	3.36	34.90					
Station 5385; Apr. 14; latitude 48°39.5' N., longitude 45°27' W.; depth 1,097 m.; dynamic height 970.864								Station 5389; Apr. 14; latitude 48°56' N., longitude 46°39' W.; depth 2,743 m.; dynamic height 970.854							
0	2.46	34.33		0	2.46	34.33	27.41	0	3.87	34.44		0	3.87	34.44	27.37
25	2.47	34.35		25	2.47	34.35	27.43	25	3.84	34.44		25	3.84	34.44	27.38
50	2.46	34.36		50	2.46	34.36	27.44	48	2.68	34.50		50	2.70	34.50	27.53
75	2.48	34.38		75	2.48	34.38	27.45	73	2.65	34.50		75	2.65	34.50	27.54
99	2.53	34.39		100	2.55	34.39	27.46	96	2.66	34.51		100	2.65	34.51	27.55
149	2.38	34.40		150	2.40	34.40	27.48	145	2.67	34.52		150	2.70	34.53	27.55
199	3.24	34.63		200	3.25	34.63	27.58	194	2.81	34.69		200	2.85	34.70	27.68
298	3.76	34.84		300	3.75	34.84	27.70	290	2.96	34.76		300	3.10	34.78	27.72
333	3.71	34.86		400	3.60	34.87	27.75	287	3.11	34.78		400	3.25	34.80	27.72
513	3.52	34.88		600	3.55	34.89	27.76	436	3.29	34.81		600	3.40	34.83	27.73
704	3.54	34.89		800	3.50	34.89	27.77	589	3.34	34.83		800	3.45	34.88	27.77
930	3.34	34.88		(1,000)	3.35	34.88	27.77	758	3.48	34.88		1,000	3.40	34.88	27.77
								1,224	3.31	34.88					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5390; Apr. 15; latitude 48°36' N., longitude 46°54' W.; depth 2,433 m.; dynamic height 970.829													
0	2.06	34.31	0	2.06	34.31	27.44	0	-0.11	32.82	0	-0.11	32.82	26.37
27	2.08	34.30	25	2.10	34.30	27.42	26	-0.18	32.82	25	-0.20	32.82	26.38
52	2.39	34.42	50	2.35	34.41	27.49	52	-0.21	32.82	50	-0.20	32.82	26.38
79	2.62	34.52	75	2.60	34.50	27.54	78	-0.80	32.87	75	-0.75	32.85	26.42
104	2.84	34.59	100	2.80	34.58	27.58	104	-0.33	33.26	100	-0.40	33.17	26.67
157	3.35	34.76	150	3.30	34.74	27.67							
210	3.41	34.82	200	3.40	34.81	27.72							
314	3.39	34.85	300	3.40	34.85	27.75							
415	3.49	34.88	400	3.45	34.87	27.76							
621	3.53	34.90	600	3.55	34.90	27.77							
827	3.44	34.90	800	3.50	34.89	27.77							
1,044	3.36	34.87	1,000	3.40	34.88	27.77							
1,606	3.33	34.92											
Station 5391; Apr. 15; latitude 48°15' N., longitude 47°11' W.; depth 1,390 m.; dynamic height 970.918													
0	-1.41	33.21	0	-1.41	33.21	26.74	0	-1.02	32.90	0	-1.02	32.90	26.47
24	-1.40	33.21	25	-1.40	33.21	26.74	26	-1.22	32.91	25	-1.20	32.91	26.49
48	-1.46		50	-1.45	33.21	26.74	51	-1.20	32.93	50	-1.20	32.93	26.50
73	-0.02	33.85	75	-0.95	33.86	27.25	77	-1.50	33.02	75	-1.50	33.01	26.58
97	1.10	34.12	100	1.15	34.15	27.37	103	-1.20	33.25	100	-1.25	33.21	26.73
144	2.00	34.42	150	2.05	34.45	27.55	154	0.27	33.59	150	0.15	33.56	26.96
193	2.54	34.59	200	2.60	34.61	27.63							
290	3.09	34.71	300	3.10	34.72	27.68							
380	3.21	34.74	400	3.20	34.75	27.69							
566	3.39	34.84	600	3.45	34.86	27.75							
750	3.58	34.89	800	3.60	34.89	27.76							
944	3.48	34.89	(1,000)	3.45	34.89	27.77							
1,394		34.89											
Station 5392; Apr. 15; latitude 47°55' N., longitude 47°26' W.; depth 368 m.; dynamic height 970.962													
0	-1.42	33.14	0	-1.42	33.14	26.68	0	-1.01	33.12	0	-1.01	33.12	26.65
26	-1.44	33.16	25	-1.45	33.16	16.69	24	-1.00	33.16	25	-1.00	33.16	26.68
51	-1.45	33.19	50	-1.45	33.19	26.72	48	-1.00	33.14	50	-1.00	33.15	26.68
78	-1.12	33.44	75	-1.20	33.42	26.91	72	-1.25	33.32	75	-1.20	33.36	26.85
103	0.93	33.96	100	0.70	33.91	27.21	96	-0.50	33.59	100	-0.35	33.64	27.04
155	1.78	34.27	150	1.75	34.26	27.42	144	1.23	34.08	150	1.35	34.10	27.32
199	1.92	34.36	200	1.90	34.36	27.49	193	1.60	34.20	200	1.65	34.22	27.40
309	2.48	34.55	300	2.45	34.53	27.57	289	2.70	34.68	300	2.75	34.59	27.60
Station 5393; Apr. 15; latitude 47°46' N., longitude 47°32' W.; depth 320 m.; dynamic height 971.015													
0	-1.47	33.09	0	-1.47	33.09	26.63	393	2.83	34.63	400	2.85	34.63	27.62
26	-1.50	33.09	25	-1.50	33.09	26.63	576	3.30	34.78	600	3.35	34.80	27.71
51	-1.52	33.08	50	-1.50	33.09	26.63							
78	-1.56	33.11	75	-1.55	33.10	26.65							
103	-1.28	33.40	100	-1.35	33.36	26.85							
155	1.37	34.04	150	1.15	33.98	27.23							
206	1.57		200	1.55	34.13	27.32							
309	1.97	34.34	300	1.95	34.32	27.46							
Station 5394; Apr. 26; latitude 46°46.5' N., longitude 48°38' W.; depth 84 m.; dynamic height 971.056													
0	0.31	32.84	0	0.31	32.84	26.37	0	-0.69	33.25	0	-0.69	33.25	26.74
28	0.29	32.83	25	0.30	32.83	26.36	26	-0.69	33.26	25	-0.70	33.26	26.75
55	0.28	32.84	50	0.30	32.84	26.37	51	-0.16	33.32	50	-0.20	33.31	26.77
80	-0.23	32.95	75	-0.10	32.91	26.44	77	0.08	33.87	75	0.05	33.83	27.18
							102	0.95	34.10	100	0.90	34.09	27.34
							153	1.69	34.31	150	1.65	34.30	27.52
							204	2.12	34.44	200	2.10	34.43	27.52
							306	3.31	34.73	300	3.25	34.71	27.65
							336	3.70	34.84	400	3.60	34.85	27.73
							508	3.51	34.87	600	3.55	34.88	27.75
							684	3.51	34.89	800	3.45	34.88	27.76
							905	3.36	34.88	(1,000)	3.35	34.88	27.77
Station 5395; Apr. 26; latitude 46°46' N., longitude 48°06' W.; depth 114 m.; dynamic height 971.055													
0	-0.11	32.82	0	-0.11	32.82	26.37							
26	-0.18	32.82	25	-0.20	32.82	26.38							
52	-0.21	32.82	50	-0.20	32.82	26.38							
78	-0.80	32.87	75	-0.75	32.85	26.42							
104	-0.33	33.26	100	-0.40	33.17	26.67							
Station 5396; Apr. 26; latitude 46°44.5' N., longitude 47°30' W.; depth 172 m.; dynamic height 971.041													
0	-1.02	32.90	0	-1.02	32.90	26.47							
26	-1.22	32.91	25	-1.20	32.91	26.49							
51	-1.20	32.93	50	-1.20	32.93	26.50							
77	-1.50	33.02	75	-1.50	33.01	26.58							
103	-1.20	33.25	100	-1.25	33.21	26.73							
154	0.27	33.59	150	0.15	33.56	26.96							
Station 5397; Apr. 26; latitude 46°41.5' N., longitude 47°08' W.; depth 334 m.; dynamic height 971.002													
0	-1.17	32.97	0	-1.17	32.97	26.53							
25	-1.15	33.09	25	-1.15	33.09	26.63							
49	-1.40	33.22	50	-1.40	33.23	26.75							
74	-0.56	33.42	75	-0.55	33.43	26.88							
99	0.39	33.64	100	0.40	33.65	27.02							
148	0.31	33.88	150	0.35	33.89	27.21							
197	1.65	34.20	200	1.20	34.21	27.42							
296	2.25	34.47	300	2.25	34.48	27.55							
Station 5398; Apr. 26; latitude 46°44' N., longitude 47°01' W.; depth 644 m.; dynamic height 970.994													
0	-1.01	33.12	0	-1.01	33.12	26.65							
24	-1.00	33.16	25	-1.00	33.16	26.68							
48	-1.00	33.14	50	-1.00	33.15	26.68							
72	-1.25	33.32	75	-1.20	33.36	26.85							
96	-0.50	33.59	100	-0.35	33.64	27.04							
144	1.23	34.08	150	1.35	34.10	27.32							
193	1.60	34.20	200	1.65	34.22	27.40							
289	2.70	34.68	300	2.75	34.59	27.60							
393	2.83	34.63	400	2.85	34.63	27.62							
576	3.30	34.78	600	3.35	34.80	27.71							
Station 5399; Apr. 26; latitude 46°35.5' N., longitude 46°44' W.; depth 1,192 m.; dynamic height 970.929													
0	-0.69	33.25	0	-0.69	33.25	26.74							
26	-0.69	33.26	25	-0.70	33.26	26.75							
51	-0.16	33.32	50	-0.20	33.31	26.77							
77	0.08	33.87	75	0.05	33.83	27.18							
102	0.95	34.10	100	0.90	34.09	27.34							
153	1.69	34.31	150	1.65	34.30	27.52							
204	2.12	34.44	200	2.10	34.43	27.52							
306	3.31	34.73	300	3.25	34.71	27.65							
336	3.70	34.84	400	3.60	34.85	27.73							
508	3.51	34.87	600	3.55	34.88	27.75							
684	3.51	34.89	800	3.45	34.88	27.76							
905	3.36	34.88	(1,000)	3.35	34.88	27.77							

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Sealed values				Observed values			Sealed values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5400; Apr. 27; latitude 46°39.5' N., longitude 46°54' W., depth 1,152 m.; dynamic height 970.913							Station 5405; Apr. 28; latitude 46°37.5' N., longitude 44°56' W.; depth 201 m.; dynamic height 970.922						
0	—0.86	33.30	0	—0.86	33.30	26.78	0	3.65	33.92	0	3.65	33.92	26.98
27	—0.86	33.32	25	—0.85	33.32	26.80	27	3.66	33.95	25	3.65	33.95	27.00
53	—0.78	33.34	50	—0.80	33.34	26.82	53	3.67	33.95	50	3.70	33.95	27.00
80	1.12	33.94	75	0.75	33.82	27.14	80	3.64	33.96	75	3.65	33.96	27.01
106	1.23	34.18	100	1.20	34.14	27.36	105	2.89	34.12	100	3.05	34.08	27.16
160	2.11	34.43	150	1.95	34.39	27.51	159	3.75	34.48	150	3.55	34.42	27.39
214	2.59	34.60	200	2.45	34.56	27.60							
320	3.23	34.76	300	3.10	34.73	27.68							
356	3.50	34.81	400	3.55	34.84	27.72							
535	3.56	34.88	600	3.55	34.89	27.76							
715	3.47	34.89	800	3.50	34.89	27.77							
927	3.38	34.89	(1,000)	3.40	34.89	27.78							
Station 5401; Apr. 27; latitude 46°38.5' N., longitude 46°26' W., depth 593 m.; dynamic height 970.879							Station 5406; Apr. 28; latitude 46°37' N., longitude 44°42' W.; depth 226 m.; dynamic height 970.888						
0	0.90	33.51	0	0.90	33.51	26.88	0	3.67	33.97	0	3.67	33.97	27.02
26	1.13	33.54	25	1.15	33.54	26.88	24	3.68	33.97	25	3.70	33.97	27.02
53	1.22	33.56	50	1.20	33.56	26.90	47	3.51	33.99	50	3.45	34.00	27.07
79	1.52	34.16	75	1.45	34.07	27.29	71	3.03	34.29	75	2.95	34.31	27.36
106	2.38	34.46	100	2.20	34.43	27.52	94	2.89	34.39	100	2.90	34.40	27.44
157	2.68	34.58	150	2.65	34.56	27.59	141	3.04	34.45	150	3.20	34.49	27.48
210	3.48	34.74	200	3.40	34.72	27.65	188	3.99	34.80	(200)	4.00	34.86	27.70
316	3.80	34.88	300	3.80	34.87	27.73							
407	3.82	34.90	400	3.80	34.90	27.75							
546	3.57	34.90											
Station 5402; Apr. 28; latitude 46°38' N., longitude 45°58' W., depth 366 m.; dynamic height 970.931							Station 5407; Apr. 28; latitude 46°30' N., longitude 44°40' W.; depth 686 m.; dynamic height 970.888						
0	4.52	34.00	0	4.52	34.00	26.96	0	3.08	34.08	0	3.08	34.08	27.16
27	4.53	34.00	25	4.55	34.00	26.95	28	3.06	34.10	25	3.05	34.10	27.18
52	4.53	34.00	50	4.55	34.00	26.95	55	3.11	34.13	50	3.10	34.12	27.20
79	4.53	34.00	75	4.55	34.00	26.95	82	3.10	34.20	75	3.10	34.17	27.24
105	4.10	34.20	100	4.20	34.18	27.13	109	3.22	34.46	100	3.20	34.37	27.39
158	3.00	34.31	150	3.10	34.29	27.33	165	3.43	34.60	150	3.40	34.56	27.52
315	3.78	34.81	200	3.20	34.44	27.44	219	3.50	34.72	200	3.50	34.68	27.60
			300	3.75	34.77	27.65	328	3.91	34.86	300	3.85	34.84	27.69
							409	3.78	34.89	400	3.80	34.89	27.74
							584	3.58	34.87	600	3.60	34.87	27.75
Station 5403; Apr. 28; latitude 46°38' N., longitude 45°48' W.; depth 256 m.; dynamic height 970.936							Station 5408; Apr. 28; latitude 46°24.5' N., longitude 44°39' W.; depth 1,371 m.; dynamic height 970.888						
0	4.29	34.00	0	4.29	34.00	26.98	0	3.22	34.15	0	3.22	34.15	27.21
25	4.29	34.01	25	4.29	34.01	26.99	27	3.17	34.18	25	3.15	34.18	27.23
48	4.29	34.01	50	4.30	34.01	26.99	53	3.08	34.20	50	3.10	34.20	27.26
73	4.26	34.02	75	4.25	34.02	27.01	81	3.01	34.21	75	3.05	34.21	27.27
97	4.25	34.03	100	4.25	34.03	27.01	107	3.02	34.25	100	3.00	34.24	27.30
146	3.94	34.25	150	3.90	34.27	27.24	161	3.30	34.54	150	3.25	34.49	27.47
194	3.47	34.54	200	3.50	34.56	27.51	215	3.62	34.68	200	3.55	34.64	27.56
237	3.62	34.63					322	4.31	34.91	300	4.20	34.88	27.69
							422	3.91	34.91	400	3.95	34.91	27.74
							627	3.44	34.88	600	3.45	34.88	27.76
							827	3.37	34.89	800	3.40	34.89	27.78
							1,036	3.29	34.88	1,000	3.30	34.88	27.78
							1,248	3.31	34.89				
Station 5404; Apr. 28; latitude 46°37.5' N., longitude 45°24' W.; depth 227 m.; dynamic height 970.924							Station 5409; Apr. 28; latitude 46°00' N., longitude 44°38' W.; depth 3,841 m.; dynamic height 917.061						
0	3.66	33.92	0	3.66	33.92	26.98	0	8.68	34.56	0	8.68	34.56	26.84
27	3.69	33.92	25	3.70	33.92	26.98	26	8.84	34.60	25	8.85	34.60	26.85
53	3.67	33.92	50	3.70	33.92	26.98	53	8.89	34.62	50	8.85	34.62	26.87
80	3.63	33.96	75	3.65	33.95	27.00	79	9.08	34.68	75	9.05	34.67	26.87
106	3.22	34.15	100	3.35	34.12	27.17	106	9.10	34.70	100	9.10	34.69	26.88
160	3.28	34.41	150	3.25	34.37	27.38	158	7.77	34.78	150	7.95	34.76	27.11
213	3.77	34.62	200	3.65	34.37	27.50	211	8.03	35.01	200	8.00	34.97	27.27
							317	6.17	34.92	300	6.50	34.93	27.45
							402	5.38	34.88	400	5.40	34.88	27.55
							602	4.94	34.98	600	4.95	34.98	27.68
										(800)	4.30	34.97	27.75
										(1,000)	4.00	34.92	27.75

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t
Station 5410; Apr. 28; latitude 46°02' N., longitude 45°34' W.; depth 2,743 m.; dynamic height 970.892								Station 5414; Apr. 29; latitude 46°01' N., longitude 47°40' W.; depth 745 m.; dynamic height 970.985							
0.....	4.07	34.18		0.....	4.07	34.18	27.15	0.....	-0.93	33.23		0.....	-0.93	33.23	26.74
24.....	4.08	34.18		25.....	4.10	34.18	27.14	26.....	-0.96	33.22		25.....	-0.95	33.22	26.73
48.....	4.03	34.20		50.....	4.05	34.20	27.17	52.....	-0.98	33.23		50.....	-1.00	33.23	26.74
72.....	4.03			75.....	4.05	34.22	27.19	77.....	-1.01	33.23		75.....	-1.00	33.23	26.74
97.....	3.91	34.25		100.....	3.90	34.25	27.21	103.....	0.67	33.77		100.....	0.55	33.70	27.05
145.....	3.55	34.57		150.....	3.55	34.58	27.51	154.....	0.62	34.04		150.....	0.65	34.02	27.30
193.....	3.37	34.66		200.....	3.40	34.67	27.61	206.....	1.71	34.30		200.....	1.65	34.27	27.44
290.....	3.71	34.83		300.....	3.75	34.84	27.70	309.....	2.52	34.58		300.....	2.50	34.56	27.60
399.....	3.96	34.91		400.....	3.95	34.91	27.74	421.....	2.94	34.70		400.....	2.90	34.68	27.66
591.....	3.55	34.89		600.....	3.55	34.89	27.76	620.....	3.50	34.84		600.....	3.45	34.83	27.72
778.....	3.45	34.90		800.....	3.45	34.90	27.78								
972.....	3.41	34.90		1,000.....	3.45	34.90	27.78								
1,458.....	3.32	34.89													
Station 5411; Apr. 28-29; latitude 46°06' N., longitude 46°06' W.; depth 1,723 m.; dynamic height 970.966								Station 5415; Apr. 29; latitude 45°59.5' N., longitude 47°58' W.; depth 172 m.; dynamic height 971.038							
0.....	4.39	33.84		0.....	4.39	33.84	26.84	0.....	-1.21	32.93		0.....	-1.21	32.93	26.50
26.....	4.41	33.84		25.....	4.40	33.84	26.84	26.....	-1.34	32.96		25.....	-1.35	32.96	26.53
51.....	4.39	33.84		50.....	4.40	33.84	26.84	52.....	-1.42	33.00		50.....	-1.40	32.99	26.56
76.....	4.35			75.....	4.35	33.84	26.84	77.....	-1.53	33.13		75.....	-1.50	33.11	26.65
101.....	3.83	33.96		100.....	3.85	33.95	26.99	103.....	-0.74	33.38		100.....	-0.85	33.34	26.82
152.....	4.28	34.48		150.....	4.25	34.45	27.34	155.....	-0.08	33.52		150.....	-0.10	33.51	26.93
203.....	4.23	34.67		200.....	4.25	34.66	27.51								
304.....	5.09	34.94		300.....	5.10	34.93	27.62								
367.....	4.50	34.88		400.....	4.45	34.89	27.67								
549.....	4.25	34.95		600.....	4.10	34.94	27.75								
729.....	3.68	34.91		800.....	3.55	34.90	27.77								
919.....	3.39	34.89		1,000.....	3.40	34.89	27.78								
1,410.....	3.33	34.89													
Station 5412; Apr. 29; latitude 46°04' N., longitude 46°39' W.; depth 539 m.; dynamic height 970.966								Station 5416; Apr. 29; latitude 46°00.5' N., longitude 48°11' W.; depth 121 m.; dynamic height 971.042							
0.....	3.47	33.47		0.....	3.47	33.47	26.64	0.....	-0.87	32.91		0.....	-0.87	32.91	26.47
25.....	3.48	33.44		25.....	3.48	33.44	26.62	25.....	-1.10	32.94		25.....	-1.10	32.94	26.51
50.....	3.49	33.46		50.....	3.49	33.46	26.63	50.....	-1.17	32.95		50.....	-1.17	32.95	26.52
75.....	2.69	33.86		75.....	2.69	33.86	27.02	75.....	-1.43	33.10		75.....	-1.43	33.10	26.64
99.....	4.70	34.40		100.....	4.75	34.41	27.26	100.....	-0.78	33.28		100.....	-0.78	33.28	26.77
149.....	6.54	34.77		150.....	6.55	34.77	27.32								
199.....	4.64	34.63		200.....	4.65	34.63	27.44								
298.....	4.87	34.87		300.....	4.90	34.87	27.61								
383.....	4.24	34.90		400.....	4.20	34.90	27.71								
470.....	4.04	34.92													
Station 5413; Apr. 29; latitude 46°03' N., longitude 47°15' W.; depth 1,513 m.; dynamic height 970.910								Station 5417; Apr. 29; latitude 46°02' N., longitude 48°33' W.; depth 95 m.; dynamic height 971.048							
0.....	1.46	33.52		0.....	1.46	33.52	26.85	0.....	-0.28	32.82		0.....	-0.28	32.82	26.38
26.....	1.75	33.57		25.....	1.75	33.57	26.87	26.....	-0.54	32.84		25.....	-0.55	32.84	26.41
51.....	1.93	33.64		50.....	1.95	33.63	26.90	52.....	-0.68	32.84		50.....	-0.65	32.84	26.42
77.....	1.74	34.04		75.....	1.75	33.99	27.20	78.....	-1.15	33.15		75.....	-1.10	33.11	26.64
102.....	1.81	34.26		100.....	1.80	34.24	27.40								
154.....	3.37	34.56		150.....	3.35	34.54	27.50								
205.....	3.37	34.66		200.....	3.40	34.65	27.59								
307.....	4.22	34.90		300.....	4.20	34.89	27.70								
388.....	4.10	34.90		400.....	4.05	34.90	27.72								
577.....	3.67	34.89		600.....	3.65	34.89	27.75								
763.....	3.52	34.89		800.....	3.50	34.89	27.77								
962.....	3.47	34.89		1,000.....	3.50	34.89	27.77								
1,342.....	3.34	34.885													
Station 5418; Apr. 29; latitude 45°50.5' N., longitude 48°15' W.; depth 121 m.; dynamic height 971.038								Station 5419; Apr. 29; latitude 45°48' N., longitude 48°08' W.; depth 181 m.; dynamic height 971.024							
0.....	-0.75	32.90		0.....	-0.75	32.90	26.46	0.....	-1.13	33.03		0.....	-1.13	33.03	26.58
25.....	-1.24	32.93		25.....	-1.24	32.93	26.50	26.....	-1.44	32.97		25.....	-1.45	32.97	26.54
50.....	-1.33	32.96		50.....	-1.33	32.96	26.53	52.....	-1.39	32.99		50.....	-1.40	32.98	26.55
76.....	-1.34	33.15		75.....	-1.35	33.14	26.68	77.....	-0.47	33.44		75.....	-0.55	33.41	26.87
101.....	-0.79	33.30		100.....	-0.80	33.30	26.78	103.....	0.02	33.55		100.....	0.00	33.54	26.95
								155.....	0.00	33.56		150.....	0.00	33.56	26.97

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5420; Apr. 29; latitude 45°42' N., longitude 48°02' W.; depth 690 m.; dynamic height 970.974													
0	-0.66	33.10	0	-0.66	33.10	26.62	0	5.73	33.92	0	5.73	33.92	26.75
26	-1.08	33.25	25	-1.10	33.30	26.79	24	6.29	34.01	25	6.35	34.02	26.76
52	-1.10	33.25	50	-1.10	33.30	26.79	47	8.04	34.36	50	8.15	34.38	26.78
78	-1.09	33.50	75	-1.10	33.47	26.94	71	8.68	34.52	75	8.80	34.55	26.82
104	0.34	33.86	100	0.05	33.80	27.16	95	9.22	34.66	100	9.15	34.65	26.84
155	1.30	34.16	150	1.25	34.14	27.36	141	7.06	34.58	150	6.55	34.56	27.15
208	1.75	34.32	200	1.65	34.29	27.45	188	5.15	34.48	200	5.05	34.50	27.29
312	2.50	34.56	300	2.40	34.53	27.58	283	4.97	34.75	300	5.10	34.81	27.54
413	2.95	34.68	400	2.90	34.67	27.66	345	5.49	34.97	400	5.25	34.98	27.65
611	3.38	34.81	600	3.35	34.81	27.72	522	4.74	34.98	600	4.50	34.97	27.73
							704	4.17	34.96	800	3.95	34.95	27.77
							900	3.81	34.93	1,000	3.75	34.93	27.77
							1,422	3.46	34.93				
Station 5421; Apr. 29; latitude 45°37' N., longitude 47°44' W.; depth 1,420 m.; dynamic height 970.929													
0	3.24	33.55	0	3.24	33.55	26.73	0	3.87	33.92	0	3.87	33.92	26.96
24	3.19	33.60	25	3.20	33.60	26.77	25	3.89	33.99	25	3.89	33.99	27.01
48	2.81	33.60	50	2.80	33.61	26.82	50	3.99	34.04	50	3.99	34.04	27.04
71	3.49	33.89	75	3.60	33.95	27.01	74	4.07	34.08	75	4.10	34.08	27.06
95	3.95	34.21	100	3.95	34.26	27.23	99	4.04	34.10	100	4.05	34.10	27.09
143	3.93	34.57	150	4.00	34.60	27.49	148	3.06	34.30	150	3.05	34.31	27.35
191	4.29	34.77	200	4.20	34.77	27.61	197	3.46	34.52	200	3.50	34.53	27.48
286	3.48	34.76	300	3.55	34.77	27.67	296	3.96	34.79	300	3.95	34.80	27.65
354	3.78	34.82	400	3.80	34.84	27.70	393	3.84	34.86	400	3.85	34.86	27.71
532	3.69	34.88	600	3.60	34.89	27.76	587	3.59	34.88	600	3.60	34.88	27.75
710	3.52	34.89	800	3.50	34.89	27.77	779	3.43	34.89	800	3.40	34.89	27.78
897	3.42	34.885	1,000	3.40	34.88	27.77	977	3.35	34.89	1,000	3.35	34.89	27.78
1,233	3.35						1,477	3.29	34.89				
Station 5422; Apr. 29-30; latitude 45°22.5' N., longitude 47°17' W.; depth 2,561 m.; dynamic height 970.949													
0	3.79	33.64	0	3.79	33.64	26.75	0	4.45	34.02	0	4.45	34.02	26.98
25	3.63	33.66	25	3.63	33.66	26.78	26	4.34	34.04	25	4.35	34.04	27.00
50	3.08	33.63	50	3.08	33.63	26.80	53	4.29	34.06	50	4.30	34.06	27.03
75	3.21	33.73	75	3.21	33.73	26.87	79	4.06	34.14	75	4.10	34.13	27.10
101	3.49	34.07	100	3.50	34.07	27.12	106	3.66	34.23	100	3.70	34.21	27.21
150	3.83	34.44	150	3.85	34.44	27.38	158	3.41	34.47	150	3.45	34.44	27.41
201	4.02	34.62	200	4.00	34.62	27.51	211	3.40	34.57	200	3.40	34.55	27.51
302	4.00	34.79	300	4.00	34.78	27.63	317	3.84	34.80	300	3.75	34.77	27.65
389	3.92	34.85	400	3.90	34.86	27.71	402	4.04	34.89	400	4.05	34.89	27.71
581	3.75	34.91	600	3.75	34.91	27.76	599	3.83	34.90	600	3.85	34.90	27.74
772	3.52	34.90	800	3.50	34.90	27.78	792	3.48	34.90	800	3.50	34.90	27.78
968	3.48	34.90	1,000	3.50	34.90	27.78	993	3.45	34.90	1,000	3.45	34.90	27.78
1,474	3.35	34.91					1,498	3.28	34.885				
Station 5423; Apr. 30; latitude 45°22.5' N., longitude 46°33' W.; depth 3,017 m.; dynamic height 971.076													
0	11.14	35.16	0	11.14	35.16	26.89	0	3.06	33.33	0	3.06	33.33	26.57
25	11.15	35.16	25	11.15	35.16	26.89	22	3.07	33.32	25	3.10	33.33	26.56
50		35.17	50	11.15	35.17	26.90	43	3.10	33.36	50	3.05	33.36	26.59
75	11.18	35.17	75	11.18	35.17	26.89	65	2.80	33.37	75	2.50	33.38	26.65
100	11.28	35.18	100	11.28	35.18	26.89	87	2.13	33.40	100	2.45	33.54	26.79
150	11.27	35.17	150	11.27	35.17	26.88	131		34.04	150	4.35	34.24	27.16
200	10.10	35.16	200	10.10	35.16	27.08	174	5.04	34.46	200	4.50	34.47	27.34
300	7.19	34.93	300	7.19	34.93	27.35	261	3.29	34.50	300	3.65	34.58	27.50
385	5.78	34.92	400	5.65	34.92	27.56	279	3.46	34.53	400	4.50	34.86	27.64
579	4.61	34.98	600	4.50	34.97	27.73	442	4.80	34.96	600	3.80	34.89	27.74
773	3.80	34.90	800	3.75	34.90	27.75	622	3.76	34.885	800	3.65	34.91	27.77
970	3.57	34.90	1,000	3.55	34.90	27.77	791	3.66	34.91	1,000	3.50	34.90	27.78
1,475	3.29	34.89					1,234	3.29	34.885				
Station 5427; Apr. 30; latitude 44°13' N., longitude 45°08' W.; depth 4,207 m.; dynamic height 971.030													

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t
Station 5428; May 1; latitude 44°19' N., longitude 45°42' W.; depth 4,024 m.; dynamic height 971.237								Station 5432; May 1; latitude 44°42.5' N., longitude 48°34' W.; depth 2,065 m.; dynamic height 970.928							
0	15.41	36.05		0	15.41	36.05	26.70	0	-0.24	33.17		0	-0.24	33.17	26.66
28	15.42	36.04		25	15.40	36.04	26.70	26	-0.29	33.18		25	-0.30	33.18	26.67
55	15.41	36.04		50	15.40	36.04	26.70	52	0.03	33.42		50	0.00	33.40	26.84
83	15.39	36.04		75	15.40	36.04	26.70	78	0.69	33.84		75	0.60	33.79	27.11
111	15.31	36.02		100	15.35	36.03	26.70	104	1.17	34.10		100	1.10	34.06	27.31
167	14.62	35.87		150	14.90	35.94	26.74	155	3.11	34.50		150	2.95	34.47	27.48
222	12.02	35.43		200	13.20	35.62	26.85	207	4.18	34.73		200	4.10	34.71	25.57
333	8.60	34.90		300	9.30	34.99	27.08	311	4.22	34.87		300	4.20	34.86	27.68
423	8.26	35.10		400	8.35	35.05	27.28	403	4.10	34.90		400	4.10	34.90	27.72
630	5.14	34.92		600	5.55	34.94	27.58	602	3.69	34.89		600	3.70	34.89	27.75
837	4.10	34.89		800	4.15	34.89	27.70	798	3.59	34.90		800	3.60	34.90	27.77
1,049	3.86	34.93		1,000	3.90	34.93	27.76	999	3.42	34.89		1,000	3.40	34.89	27.78
1,580	3.47	34.90						1,500	3.34	34.89					
Station 5429; May 1; latitude 44°16' N., longitude 46°18' W.; depth 3,896 m.; dynamic height 971.280								Station 5433; May 2; latitude 44°45.5' N., longitude 48°50' W.; depth 1476 m.; dynamic height 970.957							
0	14.72	35.87		0	14.72	35.87	26.72	0	-0.72	33.20		0	-0.72	33.20	26.71
28	14.73	35.87		25	14.72	35.87	26.72	25	-0.78	33.21		25	-0.78	33.21	26.72
55	14.75	35.89		50	14.75	35.88	26.72	50	-0.92	33.22		50	-0.92	33.22	26.73
83	14.74	35.885		75	14.75	35.89	26.72	75	-0.98	33.64		75	-0.98	33.64	27.04
111	14.72	35.87		100	14.70	35.88	26.73	100	0.48	33.92		100	0.48	33.92	27.23
167	14.47	35.82		150	14.60	35.85	26.73	150	1.60	34.21		150	1.60	34.21	27.39
222	12.27	35.41		200	13.15	35.58	26.83	201	2.52	34.40		200	2.50	34.40	27.47
333	10.96	35.29		300	11.35	35.32	26.98	301	4.23	34.76		300	4.20	34.76	27.60
426	*8.80	35.03		400	9.40	35.09	27.14	374	3.62	34.77		400	3.60	34.78	27.67
640	5.62	34.96		600	6.05	34.97	27.55	564	3.67	34.88		600	3.65	34.89	27.75
855	4.50	34.95		800	4.65	34.95	27.70	756	3.60	34.90		800	3.55	34.90	27.77
1,074	4.20	34.96		1,000	4.30	34.96	27.74	969	3.34	34.89		1,000	3.40	34.89	27.78
1,630	3.59	34.92													
Station 5430; May 1; latitude 44°26' N., longitude 47°19' W.; depth 3,695 m.; dynamic height 971.115								Station 5434; May 2; latitude 44°48' N., longitude 49°04' W.; depth 622 m.; dynamic height 971.064							
0	13.04	35.52		0	13.04	35.52	26.80	0	-0.97	32.96		0	-0.97	32.96	26.52
28	13.10	35.54		25	13.10	35.54	26.81	25	-0.96	32.96		25	-0.96	32.96	26.52
54	12.96	35.48		50	12.95	35.49	26.80	51	-0.91	32.97		50	-0.90	32.97	26.53
82	12.71	35.45		75	12.80	35.46	26.81	76	-1.09	33.19		75	-1.10	33.19	26.71
109	10.22	34.88		100	11.40	35.17	26.86	102	-0.86	33.28		100	-0.90	33.27	26.77
164	7.96	34.62		150	8.40	34.66	26.97	152	0.23	33.66		150	0.15	33.66	27.04
219	9.05	34.95		200	8.65	34.86	27.08	203	0.46	33.72		200	0.45	33.72	27.07
328	8.15	35.10		300	8.55	35.09	27.28	305	1.94	34.37		300	1.85	34.35	27.48
430	6.26	35.00		400	6.75	35.02	27.49	402	2.97	34.69		400	2.95	34.68	27.65
638	4.87	34.99		600	5.10	34.99	27.67	591	3.24	34.74		600	3.30	34.74	27.67
843	3.73	34.88		800	3.90	34.90	27.74								
1,051	3.86	34.94		1,000	3.85	34.93	27.76								
1,567	3.43	34.90													
Station 5431; May 1; latitude 44°37.5' N., longitude 48°02' W., depth 3,457 m.; dynamic height 970.974								Station 5435; May 2; latitude 44°48.5' N., longitude 49°10' W.; depth 70 m.; dynamic height 971.108							
0	2.80	33.18		0	2.80	33.18	26.48	0	-0.73	32.96		0	-0.73	32.96	26.51
25	2.64	33.20		25	2.64	33.20	26.51	23	-0.74	32.97		25	-0.75	32.97	26.52
49	1.58	33.24		50	1.55	33.24	26.62	46	-0.94	33.06		50	-1.00	33.07	26.61
74	1.20	33.60		75	1.25	33.61	26.93	69	-1.03	33.12					
99	2.70	34.14		100	2.75	34.15	27.25								
148	5.77	34.73		150	5.80	34.73	27.38								
197	3.75	34.52		200	3.75	34.52	27.45								
296	3.98	34.77		300	4.00	24.78	27.63								
400	4.68	34.96		400	4.70	34.96	27.70								
594	4.18	34.94		600	4.20	34.94	27.74								
783	3.86	34.93		800	3.90	34.93	27.76								
978	3.61	34.91		1,000	3.60	34.91	27.78								
1,466	3.44	34.90													
Station 5436; May 2; latitude 44°46.5' N., longitude 49°24' W.; depth 66 m.; dynamic height 971.115								Station 5437; May 2; latitude 44°46.5' N., longitude 49°24' W.; depth 66 m.; dynamic height 971.115							
0	-0.02	32.85		0	-0.02	32.85	26.40	0	-0.02	32.85		0	-0.02	32.85	26.40
29	0.07	32.88		25	0.05	32.88	26.42	29	0.07	32.88		25	0.05	32.88	26.42
58	-0.56	32.98		50	-0.35	32.95	26.48	58	-0.56	32.98		50	-0.35	32.95	26.48

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰	σ_t
Station 5437; May 2; latitude 44°14' N., longitude 49°21' W.; depth 57 m.; dynamic height 971.078								Station 5442; May 2; latitude 43°56' N., longitude 48°23' W.; depth 3,237 m.; dynamic height 970.950							
0	—0.37	32.95		0	—0.37	32.95	26.48	0	1.79	33.09		0	1.79	33.09	26.47
27	—0.38	32.96		25	—0.35	32.96	26.49	27	1.79	33.12		25	1.80	33.12	26.50
46	—0.40	32.96		(50)	—0.40	32.96	26.50	52	1.11	33.18		50	1.15	33.17	26.59
								79	1.35	33.75		75	1.30	33.67	26.98
								105	2.42	34.19		100	2.20	34.11	27.27
								158	3.66	34.58		150	3.55	34.54	27.48
								210	3.83	34.68		200	3.80	34.66	27.56
								315	4.32	34.86		300	4.30	34.84	27.65
								382	4.08	34.89		400	4.05	34.89	27.71
								578	3.69	34.89		600	3.65	34.89	27.75
								779	3.50	34.89		800	3.50	34.89	27.77
								984	3.38	34.88		1,000	3.40	34.88	27.77
								1,515	3.32	34.88					
Station 5438; May 2; latitude 44°10.5' N., longitude 49°04' W.; depth 93 m.; dynamic height 971.077								Station 5443; May 2; latitude 43°46' N., longitude 48°04' W.; depth 3,475 m.; dynamic height 971.001							
0	—0.65	32.95		0	—0.65	32.95	26.50	0	5.71	33.67		0	5.71	33.67	26.56
25	—0.71	32.96		25	—0.71	32.96	26.51	24	6.17	33.82		25	6.20	33.83	26.62
50	—0.71	32.96		50	—0.71	32.96	26.51	47	6.79	34.26		50	6.80	34.26	26.89
75	—0.75	32.95		75	—0.75	32.95	26.50	71	4.99	34.17		75	5.00	34.19	27.05
								95	5.98	34.41		100	6.25	34.46	27.12
								141	8.09	34.94		150	7.85	34.93	27.26
								188	6.56	34.83		200	6.25	34.82	27.40
								283	4.75	34.78		300	4.65	34.80	27.58
								285	4.86	34.82		400	4.15	34.81	27.64
								420	4.13	34.82		600	4.30	34.90	27.69
								551	4.33	34.94		800	4.00	34.94	27.76
								708	4.13	34.94		1,000	3.75	34.93	27.77
								1,130	3.53	34.90					
Station 5440; May 2; latitude 44°06.5' N., longitude 48°49' W.; depth 615 m.; dynamic height 971.037								Station 5444; May 3; latitude 43°37.5' N., longitude 47°37' W.; depth 3,749 m.; dynamic height 971.008							
0	—0.86	33.04		0	—0.86	33.04	26.58	0	2.68	33.26		0	2.68	33.26	26.54
26	—0.89	33.04		25	—0.85	33.04	26.58	25	2.43	33.24		25	2.43	33.24	26.55
53	—1.14	33.19		50	—1.10	33.18	26.70	48	1.20	33.23		50	1.25	33.25	26.64
79	—0.65	33.40		75	—0.70	33.37	26.84	73	6.12	34.14		75	6.35	34.19	26.89
106	—0.26	33.49		100	—0.35	33.47	26.91	96	8.10	34.74		100	8.00	34.74	27.09
157	0.81	33.82		150	0.70	33.77	27.10	145	6.35	—		150	6.30	34.69	27.29
210	1.36	34.06		200	1.30	34.02	27.26	194	6.01	34.76		200	6.00	34.76	27.39
316	2.39	34.48		300	2.25	34.42	27.51	290	5.26	34.84		300	5.15	34.85	27.56
418	2.96	34.67		400	2.90	34.64	27.63	332	4.72	34.87		400	4.40	34.84	27.63
616	3.43	34.80		600	3.40	34.79	27.70	448	4.32	34.825		600	4.20	34.95	27.75
								530	4.34	34.97		800	3.85	34.91	27.75
								682	4.02	34.92		1,000	3.65	34.89	27.75
								1,098	3.52	34.88					
Station 5441; May 2; latitude 44°03.5' N., longitude 48°40' W.; depth 1,792 m.; dynamic height 970.965								Station 5445; May 3; latitude 43°27' N., longitude 46°50' W.; depth 4,024 m.; dynamic height 971.323							
0	—0.63	33.16		0	—0.63	33.16	26.66	0	16.44	36.21		0	16.44	36.21	26.60
26	—0.89	33.20		25	—0.85	33.20	26.71	27	16.39	36.20		25	16.40	36.20	26.60
51	—0.73	33.29		50	—0.70	33.29	26.77	53	16.35	36.19		50	16.35	36.19	26.60
76	—0.48	33.57		75	—0.48	33.57	27.00	80	16.30	36.175		75	16.30	36.18	26.60
101	0.31	33.82		100	0.30	33.81	27.15	106	15.16	35.86		100	15.40	35.94	26.62
153	1.71	34.19		150	1.70	34.17	27.35	160	13.85	35.56		150	13.90	35.60	26.69
204	2.32	34.46		200	2.30	34.44	27.52	213	13.74	35.57		200	13.80	35.58	26.69
305	3.06	34.66		300	3.05	34.65	27.62	319	12.66	35.61		300	13.00	35.64	26.90
413	3.29	34.75		400	3.25	34.74	27.67	311	12.85	35.65		400	10.60	35.31	27.11
616	3.66	34.87		600	3.65	34.86	27.73	448	9.24	35.20		600	6.20	35.00	27.55
819	3.58	34.88		800	3.60	34.88	27.75	572	6.59	35.01		800	4.85	34.97	27.69
1,025	3.46	34.87		1,000	3.45	34.87	27.76	718	5.22	34.98		1,000	4.25	34.95	27.74
1,543	3.39	34.88						1,086	3.99	34.94					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5446; May 3; latitude 43°24.5' N., longitude 46°01' W.; depth 4,481 m.; dynamic height 971.452								Station 5450; May 4; latitude 42°49' N., longitude 46°38' W.; depth 4,390 m.; dynamic height 971.560							
0	17.06	36.34		0	17.06	36.34	26.54	0	17.02	36.32		0	17.02	36.32	26.54
28	17.00	36.33		25	17.00	36.33	26.55	25	17.02	36.31		25	17.02	36.31	26.53
55	16.99	36.33		50	17.00	36.33	26.55	51	17.00	36.305		50	17.00	36.31	26.53
83	16.99	36.33		75	17.00	36.33	26.55	76	16.98	36.29		75	17.00	36.30	26.53
110	16.97	36.33		100	17.00	36.33	26.55	102	16.94	36.295		100	16.95	36.29	26.54
166	16.94	36.305		150	16.95	36.32	26.55	151	16.90	36.29		150	16.90	36.29	26.55
221	16.05	36.10		200	16.40	36.18	26.58	202	16.87	36.28		200	16.85	36.28	26.55
331	*14.50	35.78		300	14.90	35.94	26.74	304	16.23	36.16		300	16.30	36.17	26.59
291	*15.02	36.07		400	13.25	35.91	27.06	457	13.91	35.80		400	15.05	35.96	26.72
429		35.90		600	9.65	35.33	27.28	677	8.42	35.08		600	10.35	35.32	27.16
563	10.36	35.44		800	6.30	35.09	27.60	892	5.86	35.05		800	6.70	35.06	27.53
692	7.92	35.15		1,000	4.70	35.04	27.76	1,113	4.65	35.00		1,000	5.15	35.03	27.70
995	4.65	35.04						1,668	3.77	34.93					
Station 5447; May 3; latitude 43°11.5' N., longitude 45°24' W.; depth 4,663 m.; dynamic height 971.611								Station 5451; May 4; latitude 43°01.5' N., longitude 47°02' W.; depth 3,841 m.; dynamic height 971.336							
0	17.09	36.35		0	17.09	36.35	26.54	0	15.86	36.08		0	15.86	36.08	26.62
28	16.92	36.31		25	16.95	36.32	26.55	26	15.86	36.08		25	15.85	36.08	26.62
55	16.91	36.32		50	16.90	36.32	26.57	51	15.86	36.08		50	15.85	36.08	26.62
83	16.91	36.31		75	16.90	36.31	26.56	77	15.83	36.065		75	15.85	36.07	26.62
111	16.84	36.30		100	16.85	36.30	26.56	103	15.81	36.06		100	15.80	36.06	26.62
167	16.58	36.25		150	16.65	36.27	26.59	153	15.54	35.955		150	15.55	35.97	26.61
222	16.46	36.23		200	16.50	36.24	26.60	205	13.91	35.59		200	14.05	35.63	26.68
333	16.35	36.22		300	16.40	36.22	26.61	308	13.62	35.70		300	13.70	35.69	26.80
417	*14.79	35.82		400	15.15	35.91	26.66	485	7.89	34.975		400	10.70	35.32	27.10
628	10.57	35.35		600	11.15	35.39	27.42	730	5.04	34.94		600	5.70	34.95	27.57
839	7.51	35.12		800	7.95	35.15	27.42	975	4.59	35.00		800	4.90	34.95	27.67
1,051	5.23	35.06		1,000	5.70	35.07	27.67	1,214	4.09	34.99		1,000	4.55	35.00	27.75
1,589	3.98	34.97						1,800	3.54	34.925					
Station 5448; May 3; latitude 42°43' N., longitude 45°43' W.; depth 3,572 m.; dynamic height 971.688								Station 5452; May 4; latitude 43°06' N., longitude 47°57' W.; depth 3,365 m.; dynamic height 971.009							
0	16.79	36.28		0	16.79	36.28	26.56	0	1.34	33.17		0	1.34	33.17	26.58
24	16.79	36.28		25	16.80	36.28	26.56	25	0.46	33.12		25	0.46	33.12	26.59
49	16.80	36.27		50	16.80	36.28	26.56	50	2.73	33.45		50	2.73	33.45	26.70
73	16.82	36.275		75	16.80	36.28	26.56	76	1.37	33.58		75	1.35	33.58	26.90
97	16.80	36.27		100	16.80	36.28	26.56	101	8.32	34.74		100	8.30	34.74	27.04
145	16.83	36.285		150	16.80	36.27	26.55	150	1.19	33.96		150	1.20	33.96	27.22
194	16.82	36.27		200	16.80	36.27	26.55	200	2.11	34.28		200	2.10	34.28	27.40
291	16.89	36.30		300	16.90	36.30	26.55	301	5.10	34.86		300	5.10	34.86	27.57
341	16.63	36.24		400	16.10	36.15	26.62	378	4.24	34.78		400	4.25	34.79	27.61
524	14.60	35.90		600	13.10	35.69	26.93	565	4.46	34.975		600	4.40	34.97	27.74
715	10.76	35.37		800	9.15	35.24	27.30	752	3.97	34.93		800	3.85	34.92	27.76
914	7.39	35.14		1,000	6.40	35.09	27.59	943	3.68	34.89		1,000	3.65	34.90	27.76
1,449	4.40	34.98						1,428	3.46	34.89					
Station 5449; May 4; latitude 42°26.5' N., longitude 46°12' W.; depth 4,390 m.; dynamic height 971.651								Station 5453; May 4; latitude 43°12' N., longitude 48°50' W.; depth 2,360 m.; dynamic height 970.947							
0	16.85	36.28		0	16.85	36.28	26.55	0	1.88	33.10		0	1.88	33.10	26.48
25	16.85	36.28		25	16.85	36.28	26.55	25	1.61	33.11		25	1.65	33.11	26.50
49	16.85	36.28		50	16.85	36.28	26.55	51	0.82	33.38		50	0.85	33.37	26.77
74	16.87	36.28		75	16.85	36.28	26.55	77	1.55	33.96		75	1.55	33.91	27.15
99	16.86	36.28		100	16.85	36.28	26.55	103	1.69	34.16		100	1.65	34.14	27.33
147	16.89	36.28		150	16.90	36.28	26.54	153	2.49	34.45		150	2.50	34.43	27.49
196	16.87	36.28		200	16.90	36.28	26.54	205	2.71	34.57		200	2.65	34.56	27.59
295	16.58	36.215		300	16.55	36.20	26.56	308	4.22	34.80		300	4.20	34.78	27.61
340	16.26	36.13		400	15.50	36.00	26.65	413	4.26	34.92		400	4.25	34.91	27.71
552	13.01	35.66		600	12.10	35.55	27.02	613	3.96	34.91		600	4.00	34.91	27.74
790	8.55	35.13		800	8.35	35.12	27.33	808	3.58	34.87		800	3.60	34.87	27.75
993	5.99	35.08		1,000	5.90	35.08	27.65	1,011	3.48	34.895		1,000	3.50	34.89	27.77
1,512	4.17	34.96						1,520	3.39	34.90					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5454; May 5; latitude 42°50.5' N., longitude 49°02' W.; depth 2,260 m.; dynamic height 970.968								Station 5458; May 6; latitude 40°58' N., longitude 48°01' W.; depth 3,475 m.; dynamic height 971.001							
0	3.40	33.07		0	3.40	33.07	26.33	0	3.11	33.07		0	3.11	33.07	26.36
25	3.54	33.39		25	3.54	33.39	26.57	23	2.10	33.14		25	2.05	33.16	26.52
50		34.81		50	9.65	34.81	26.88	47	1.89	33.54		50	1.90	33.58	26.87
75	2.93	33.98		75	2.93	33.98	27.09	70	3.21	33.85		75	3.60	33.91	26.98
100	1.00	33.87		100	1.00	33.87	27.16	93	4.91	34.14		100	4.75	34.15	27.05
149	6.57	34.80		150	6.55	34.80	27.34	140	3.38	34.26		150	3.25	34.30	27.32
199	6.13	34.93		200	6.10	34.93	27.50	187	3.17	34.52		200	3.25	34.55	27.52
299	4.20	34.81		300	4.15	34.81	27.64	280	4.21	34.70		300	4.50	34.75	27.55
362	3.75	34.81		400	3.75	34.82	27.69	405	5.69	35.04		400	5.65	35.03	27.64
538	3.72	34.88		600	3.70	34.88	27.74	609	4.65	34.99		600	4.70	34.99	27.72
712	3.58	34.88		(800)	3.55	34.88	27.75	814	3.96	34.91		800	4.00	34.91	27.74
903	3.49			(1,000)	3.50	34.88	27.76	1,012	3.70	34.91		1,000	3.70	34.91	27.77
1,400	3.39							1,542	3.43	34.90					
Station 5455; May 5; latitude 42°25' N., longitude 48°24' W.; depth 3,365 m.; dynamic height 971.094								Station 5459; May 6; latitude 41°25.5' N., longitude 48°55' W.; depth 3,146 m.; dynamic height 971.151							
0	5.46	33.34		0	5.46	33.34	26.33	0	5.52	33.32		0	5.52	33.32	26.30
25	5.46	33.44		25	5.46	33.44	26.41	24	5.36	33.36		25	5.35	33.37	26.36
51	8.09	34.19		50	7.90	34.17	26.66	48	7.11	33.94		50	7.40	34.03	26.62
76	11.40	35.11		75	11.40	35.11	26.81	72	11.92	35.12		75	11.90	35.12	26.72
103	7.74	34.58		100	8.25	34.64	26.97	96	11.64	35.12		100	11.20	35.10	26.84
153	4.13	34.17		150	4.25	34.19	27.13	144	6.54	34.37		150	6.60	34.40	27.02
204	5.98	34.56		200	5.90	34.55	27.23	193	8.60	34.82		200	8.50	34.81	27.07
307	1.78	34.16		300	1.90	34.18	27.34	289	6.37	34.66		300	6.05	34.62	27.27
403	5.14	34.73		400	5.10	34.72	27.47	338	4.80	34.50		400	5.05	34.66	27.42
605	3.44	34.76		600	3.45	34.76	27.67	502	5.47	34.91		600	5.40	35.02	27.67
808	4.35	34.97		800	4.35	34.97	27.75	662	5.23	35.04		800	4.30	34.94	27.72
1,011	4.00	34.95		1,000	4.00	34.95	27.77	835	4.16	34.93		1,000	3.95	34.93	27.75
1,519	3.58	34.93						1,283	3.73	34.93					
Station 5456; May 5; latitude 41°59' N., longitude 47°51' W.; depth 3,749 m.; dynamic height 970.990								Station 5460; May 6; latitude 41°52' N., longitude 49°25' W.; depth 3,109 m.; dynamic height 971.251							
0	5.47	33.24		0	5.47	33.24	26.24	0	14.21	35.69		0	14.21	35.69	26.69
25	4.78	33.26		25	4.78	33.26	26.34	26	14.20	35.72		25	14.20	35.72	26.72
50	3.65	33.48		50	3.65	33.48	26.63	50	14.21	35.72		50	14.20	35.72	26.72
75	2.73	33.88		75	2.73	33.88	27.03	76	14.21	35.73		75	14.20	35.72	26.72
99	2.84	34.16		100	2.85	34.16	27.25	100	14.20	35.72		100	14.20	35.72	26.72
149	4.09	34.54		150	4.05	34.54	27.43	152	14.25	35.73		150	14.25	35.73	26.71
199	3.83	34.58		200	3.85	34.58	27.48	202	14.25	35.73		200	14.25	35.73	26.71
298	4.58	34.82		300	4.60	34.82	27.60	302	11.67	35.51		300	11.80	35.52	27.05
400	4.80	34.94		400	4.80	34.94	27.67	381	9.81	35.26		400	9.35	35.21	27.24
595	3.83	34.88		600	3.85	34.88	27.72	564	6.24	35.03		600	5.85	35.02	27.61
788	3.73	34.90		800	3.75	34.90	27.75	743	4.83	35.00		800	4.60	34.99	27.73
985	3.83	34.93		1,000	3.80	34.93	27.77	941	4.24	34.96		1,000	4.20	34.95	27.75
1,479	3.59	34.93						1,452	3.61	34.91					
Station 5457; May 5; latitude 41°35' N., longitude 47°16' W.; depth 4,024 m.; dynamic height 971.103								Station 5461; May 6; latitude 41°00.5' N., longitude 50°12' W.; depth 3,530 m.; dynamic height 971.741							
0	6.32	33.30		0	6.32	33.30	26.19	0	19.21	36.48		0	19.21	36.48	26.12
27	4.21	33.30		25	4.35	33.30	26.41	25	19.23	36.53		25	19.23	36.53	26.15
53	9.03	34.23		50	8.35	34.13	26.55	49	18.53	36.46		50	18.50	36.46	26.28
80	11.49	35.00		75	11.15	34.85	26.65	74	18.21	36.45		75	18.20	36.45	26.35
106	12.31	35.33		100	12.20	35.27	26.78	99	18.17	36.46		100	18.15	36.46	26.37
160	7.09	34.43		150	7.90	34.58	26.98	149	18.04	36.45		150	18.05	36.45	26.39
213	9.80	35.21		200	9.20	35.02	27.12	198	17.98	36.45		200	17.95	36.45	26.42
319	5.56	34.75		300	6.30	34.82	27.39	297	17.62	36.42		300	17.55	36.41	26.48
435	3.23	34.62		400	3.70	34.64	27.55	389	16.12	36.13		400	15.95	36.11	26.63
621	4.51	34.96		600	4.45	34.93	27.70	592	13.23	35.70		600	13.05	35.68	26.92
804	4.23	34.97		800	4.20	34.97	27.77	801	8.52	35.14		800	8.50	35.14	27.32
994	4.02	34.96		1,000	4.00	34.96	27.78	1,001	5.16	34.94		1,000	5.15	34.94	27.63
1,466	3.64	34.94						1,504	3.91	34.94					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5462; May 6; latitude 41°31.5' N., longitude 50°13' W.; depth 3,841 m.; dynamic height 971.355							Station 5466; May 7; latitude 42°48.5' N., longitude 50°22' W.; depth 338 m.; dynamic height 971.052						
0	16.61	35.94	0	16.61	35.94	26.34	0	5.02	33.02	0	5.02	33.02	26.12
24	16.39	35.89	25	16.40	35.88	26.34	23	3.52	33.00	25	3.55	33.05	26.30
48	15.06	35.62	50	15.00	35.61	26.47	46		34.93	50	12.45	35.04	26.55
72	14.18	35.40	75	14.20	35.40	26.47	70		35.28	75	11.40	35.10	26.80
95	14.25	35.46	100	14.20	35.47	26.53	93	7.65	34.50	100	7.35	34.50	27.00
144	13.94	35.51	150	13.90	35.51	26.62	139	6.48	34.50	150	6.60	34.54	27.13
191	13.58	35.51	200	13.45	35.51	26.72	185	7.08	34.69	200	6.80	34.73	27.25
286	12.26	35.53	300	12.05	35.51	27.00	278	5.17	34.87	(300)	4.80	34.89	27.63
440	9.62	35.24	400	10.30	35.31	27.16							
653	6.50	35.02	600	7.10	35.04	27.45							
862	5.04	35.01	800	5.35	35.01	27.66							
1,078	4.43	34.98	1,000	4.60	34.99	27.73							
1,615	3.81	34.96											
Station 5463; May 7; latitude 42°02' N., longitude 50°19' W.; depth 3,566 m.; dynamic height 971.272							Station 5467; May 7; latitude 43°01' N., longitude 50°20' W.; depth 93 m.; dynamic height 971.075						
0	13.99	35.54	0	13.99	35.54	26.62	0	4.43	32.84	0	4.43	32.84	26.05
27	14.06	35.55	25	14.05	35.55	26.62	25	4.20	32.86	25	4.20	32.86	26.09
53	14.09	35.56	50	14.10	35.56	26.62	51	3.63	33.12	50	3.65	33.12	26.34
81	14.14	35.61	75	14.10	35.60	26.65	76	0.07	33.22	75	0.25	33.22	26.68
107	14.28	35.66	100	14.20	35.64	26.66							
161	14.72	35.84	150	14.65	35.81	26.69							
215	14.03	35.70	200	14.25	35.75	26.73							
322	11.06	35.40	300	11.65	35.46	27.03							
416	8.92	35.14	400	9.20	35.18	27.24							
620	5.60	34.96	600	5.80	34.97	27.58							
822	4.39	34.92	800	4.45	34.92	27.70							
1,027	4.23	34.96	1,000	4.25	34.96	27.75							
1,535	3.64	34.92											
Station 5464; May 7; latitude 42°25' N., longitude 50°20' W.; depth 2,469 m.; dynamic height 971.128							Station 5468; May 7; latitude 43°17' N., longitude 50°16' W.; depth 68 m.; dynamic height 971.079						
0	3.13	32.96	0	3.13	32.96	26.27	0	2.67	32.78	0	2.67	32.78	26.16
24	3.36	33.05	25	3.40	33.10	26.35	26	2.41	32.81	25	2.45	32.81	26.21
50	9.17	34.31	50	9.20	34.31	26.57	53	1.82	32.80	50	1.90	32.80	26.25
74	11.37	34.95	75	11.40	34.96	26.69							
100	12.36	35.36	100	12.35	35.36	26.82							
149	11.44	35.40	150	11.40	35.40	27.03							
198	10.02	35.20	200	9.95	35.19	27.13							
298	8.44	35.10	300	8.40	35.10	27.31							
397	6.55	34.97	400	6.50	34.96	27.48							
594	3.55	34.77	600	3.55	34.77	27.67							
791	3.60	34.85	800	3.60	34.86	27.74							
989	3.79	34.92	1,000	3.80	34.92	27.77							
1,485	3.43	34.89											
Station 5465; May 7; latitude 42°45' N., longitude 50°22' W.; depth 1,024 m.; dynamic height 971.073							Station 5470; May 7; latitude 42°58' N., longitude 50°40' W.; depth 176 m.; dynamic height 971.086						
0	1.95	32.97	0	1.95	32.97	26.37	0	4.67	32.70	0	4.67	32.70	25.91
25	-0.21	32.97	25	-0.21	32.97	26.50	26	5.16	33.03	25	5.15	33.15	26.11
50	-0.75	33.03	50	-0.75	33.03	26.57	51	7.77	33.87	50	7.65	33.85	26.44
76	0.38	33.41	75	0.35	33.40	26.82	77	8.95	34.28	75	8.90	34.23	26.55
101	3.39	33.98	100	3.30	33.98	27.06	103	10.91	35.05	100	10.70	34.95	26.81
151	4.41	34.17	150	4.40	34.16	27.10	154	9.15	34.96	150	9.30	34.96	27.06
202	6.58	34.64	200	6.55	34.62	27.20							
303	6.90		300	6.90	34.95	27.41							
404	3.25	34.64	400	3.35	34.65	27.59							
601	3.64	34.81	600	3.65	34.81	27.69							
795	3.66	34.84	800	3.65	34.84	27.71							
993	3.57	34.88	1,000	3.55	34.88	27.75							
Station 5471; May 7; latitude 42°54.5' N., longitude 50°46' W.; depth 640 m.; dynamic height 971.127							Station 5472; May 7; latitude 42°54.5' N., longitude 50°46' W.; depth 640 m.; dynamic height 971.127						
0	5.37	32.92	0	5.37	32.92	26.00	0	5.37	32.92	0	5.37	32.92	26.00
25	5.29	32.98	25	5.29	32.98	26.06	25	5.29	32.98	25	5.29	32.98	26.06
50	5.98	33.24	50	5.98	33.24	26.19	50	5.98	33.24	50	5.98	33.24	26.19
75	7.70	33.87	75	7.70	33.87	26.45	75	7.70	33.87	75	7.70	33.87	26.45
101	10.89	34.85	100	10.89	34.85	26.70	101	10.89	34.85	100	10.85	34.84	26.70
151	10.20	35.14	150	10.25	35.03	26.95	151	10.20	35.14	150	10.25	35.03	26.95
201	8.39	34.93	200	8.45	34.93	27.17	201	8.39	34.93	200	8.45	34.93	27.17
302	6.84	35.00	300	6.80	35.00	27.47	302	6.84	35.00	300	6.80	35.00	27.47
403	5.29	34.88	400	5.30	34.88	27.56	403	5.29	34.88	400	5.30	34.88	27.56
593	4.04	34.88	600	4.00	34.88	27.71	593	4.04	34.88	600	4.00	34.88	27.71

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5472 May 7; latitude 42°50' N., longitude 50°50' W.; depth 1,192 m.; dynamic height 971.121								Station 5476; May 8; latitude 42°00' N., longitude 50°58' W.; depth 3,292 m.; dynamic height 971.226							
0	5.36	32.89		0	5.36	32.89	25.98	0	14.26	35.53		0	14.26	35.53	26.56
25	5.47	33.03		25	5.47	33.03	26.08	25	14.00	35.53		25	14.00	35.53	26.61
51	7.94	33.92		50	7.90	33.90	26.44	50	13.97	35.56		50	13.97	35.56	26.64
76	10.29	34.60		75	10.25	34.59	26.61	75	13.93	35.58		75	13.93	35.58	26.67
101	11.70	35.19		100	11.65	35.18	26.81	100	13.95	35.59		100	13.95	35.59	26.67
152	10.91	35.28		150	11.00	35.28	27.01	149	13.95	35.62		150	13.95	35.62	26.69
203	9.19	35.04		200	9.20	35.05	27.14	199	13.89	35.66		200	13.85	35.66	26.75
304	6.71	35.02		300	6.80	35.02	27.48	299	10.22			300	10.20	35.33	27.19
403	5.42	34.85		400	5.45	34.85	27.52	380	8.48	35.07		400	8.15	35.06	27.32
601	4.15	34.89		600	4.15	34.89	27.70	569	5.92	35.00		600	5.65	35.00	27.62
795	3.89	34.89		800	3.90	34.89	27.73	759	4.60	34.98		800	4.40	34.96	27.73
995	3.64	34.88		1,000	3.65	34.88	27.74	958	3.83	34.90		1,000	3.80	34.90	27.75
								1,474	3.57	34.90					
Station 5473; May 7-8; latitude 42°40' N., longitude 51°01' W.; depth 1,994 m.; dynamic height 971.185								Station 5477; May 29; latitude 43°20' N., longitude 50°15' W.; depth 59 m.; dynamic height 971.104							
0	5.21	32.80		0	5.21	32.80	25.94	0	6.14	32.72		0	6.14	32.72	25.76
24	5.25	32.94		25	5.30	32.98	26.06	25	4.36	32.75		25	4.36	32.75	26.08
49	8.22	34.00		50	8.30	34.04	26.49	51	2.07	32.81		50	2.15	32.81	26.24
73	9.72	34.48		75	9.85	34.50	26.61								
98	11.39	35.00		100	11.40	35.02	26.74								
147	11.14	35.13		150	11.05	35.13	26.88								
195	10.03	35.08		200	9.90	35.07	27.05								
293	7.92			300	7.80	34.94	27.27								
375	6.46	34.85		400	6.25	34.86	27.43								
565	5.09	34.92		600	4.85	34.91	27.64								
757	4.06	34.87		800	3.95	34.87	27.71								
952	3.76	34.91		1,000	3.75	34.91	27.76								
1,450	3.46	34.885													
Station 5474; May 8; latitude 42°17' N., longitude 51°29' W.; depth 3,017 m.; dynamic height 971.261								Station 5478; May 29; latitude 42°55' N., longitude 50°15' W.; depth 91 m.; dynamic height 971.089							
0	8.97	34.14		0	8.97	34.14	26.47	0	5.65	32.77		0	5.65	32.77	25.86
24	10.13	34.54		25	10.20	34.57	26.60	25	3.04	32.91		25	3.04	32.91	26.24
47	12.23	35.15		50	12.40	35.19	26.68	51	0.44	33.10		50	0.55	33.09	26.55
71	13.12	35.46		75	13.20	35.50	26.76	76	-0.74	33.27		75	-0.75	33.26	26.75
94	13.55	35.58		100	13.55	35.59	26.75								
142	13.59	35.61		150	13.60	35.61	26.76								
189	13.42	35.56		200	12.95	35.50	26.81								
283	9.12			300	8.35	34.87	27.14								
387	5.31	34.36		400	5.30	34.38	27.17								
583	5.23	34.78		600	5.20	34.81	27.52								
779	4.85	34.98		800	4.80	34.98	27.71								
977	4.28	34.94		1,000	4.25	34.94	27.73								
1,476	3.78	34.94													
Station 5475; May 8; latitude 41°58.5' N., longitude 51°58' W.; depth 4,115 m.; dynamic height 971.227								Station 5479; May 29; latitude 42°45' N., longitude 50°15' W.; depth 348 m.; dynamic height 971.077							
0	10.18	34.52		0	10.18	34.52	26.56	0	3.96	32.90		0	3.96	32.90	26.14
26	12.03	35.14		25	12.00	35.13	26.71	24	1.41	32.93		25	1.30	32.93	26.34
52	12.55	35.31		50	12.50	35.30	26.74	47	-0.57	33.06		50	-0.60	33.07	26.59
78	13.16			75	13.10	35.44	26.73	71	-0.72	33.16		75	-0.80	33.18	26.69
103	13.25	35.50		100	13.20	35.49	26.75	94	-1.09	33.26		100	-1.05	33.28	26.78
154	13.23	35.52		150	13.25	35.52	26.76	140	-0.54	33.47		150	0.55	33.60	26.97
206	13.49	35.59		200	13.45	35.59	26.77	187	5.00	34.28		200	4.70	34.30	27.17
309	11.69	35.49		300	11.90	35.50	27.02	281	2.42	34.38		(300)	2.70	34.50	27.53
411	9.20	35.47		400	9.45	35.47	27.43								
614	5.98	35.00		600	6.10	35.02	27.58								
813	4.94	35.01		800	5.00	35.01	27.71								
1,021	4.27	34.97		1,000	4.30	34.97	27.75								
1,548	3.79	34.94													
Station 5480; May 29; latitude 42°33' N., longitude 50°15' W.; depth 1,188 m.; dynamic height 971.078															
0	3.78	32.84		0	3.78	32.84	26.12	0	3.78	32.84		0	3.78	32.84	26.12
25	3.67	32.84		25	3.67	32.84	26.13	25	3.67	32.84		25	3.67	32.84	26.13
49	3.02	33.05		50	3.05	33.06	26.35	49	3.02	33.05		50	3.05	33.06	26.35
74	3.70	33.44		75	3.70	33.44	26.60	74	3.70	33.44		75	3.70	33.44	26.60
98	0.64	33.52		100	0.65	33.53	26.90	98	0.64	33.52		100	0.65	33.53	26.90
148	1.29	33.77		150	1.30	33.78	27.06	148	1.29	33.77		150	1.30	33.78	27.06
196	0.91	33.86		200	0.95	33.88	27.16	196	0.91	33.86		200	0.95	33.88	27.16
294	2.15	34.39		300	2.25	34.42	27.51	294	2.15	34.39		300	2.25	34.42	27.51
297	2.21	34.41		400	2.95	34.64	27.62	297	2.21	34.41		400	2.95	34.64	27.62
447	3.20	34.71		600	3.70	34.85	27.72	447	3.20	34.71		600	3.70	34.85	27.72
598	3.71	34.85		800	3.75	34.88	27.73	598	3.71	34.85		800	3.75	34.88	27.73
811	3.76	34.88		(1,000)	3.75	34.89	27.74	811	3.76	34.88		(1,000)	3.75	34.89	27.74

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5481; May 29; latitude 42°06.5' N., longitude 50°15' W.; depth 3,200 m.; dynamic height 971.167							Station 5485; May 30; latitude 40°35.5' N., longitude 49°21' W.; depth 3,713 m.; dynamic height 971.895						
0	7.26	32.67	0	7.26	32.67	25.58	0	22.34	36.23	0	22.34	36.23	25.07
23	7.04	32.67	25	6.90	32.68	25.63	29	22.19	36.22	25	22.25	36.22	25.09
45	5.84	33.00	50	5.95	33.18	26.15	56	21.67	36.28	50	21.80	36.26	25.25
68	7.06	33.78	75	7.70	33.96	26.52	84	20.17	36.44	75	20.70	36.39	25.65
90	9.22		100	9.70	34.65	26.75	112	19.02	36.46	100	19.45	36.45	26.03
136	10.53	35.03	150	10.20	35.03	26.96	169	18.56	36.48	150	18.70	36.48	26.25
181	9.46	35.01	200	9.10	34.99	27.11	225	18.24	36.46	200	18.35	36.47	26.33
271	7.91	34.92	300	7.35	34.89	27.30	337	17.80	36.46	300	17.90	36.46	26.44
331	6.78	34.87	400	5.10	34.78	27.51	443	17.38	36.36	400	17.55	36.43	26.49
499	2.82	34.64	600	3.70	34.83	27.70	654	12.58	35.60	600	14.50	35.80	26.71
670	4.30	34.94	800	4.15	34.94	27.74	861	7.01	35.05	800	8.05	35.16	27.41
853	4.09	34.94	1,000	3.90	34.93	27.76	1,075	4.88	35.00	1,000	5.45	35.00	27.64
1,338	3.56	34.90					1,611	3.95	34.96				
Station 5482; May 30; latitude 41°37' N., longitude 50°15' W.; depth 3,658 m.; dynamic height 971.480							Station 5486; May 30; latitude 39°55' N., longitude 48°48' W.; depth 4,207 m.; dynamic height 971.464						
0	18.63	36.00	0	18.63	36.00	25.90	0	18.67	36.00	0	18.67	36.00	25.89
18	18.71	36.00	25	18.70	36.00	25.88	25	18.67	36.005	25	18.67	36.00	25.89
35	18.69	36.00	50	18.70	36.00	25.88	48	18.44	36.16	50	18.40	36.17	26.09
53	18.66	36.01	75	18.60	36.24	26.08	73	17.90	36.32	75	17.90	36.33	26.33
71	18.66	36.20	100	18.25	36.40	26.30	97	17.84	36.40	100	17.80	36.40	26.42
107	18.16	36.43	150	17.50	36.30	26.41	146	17.18	36.26	150	16.90	36.23	26.50
142	17.59	36.30	200	17.20	36.31	26.48	194	12.93	35.30	200	12.90	35.30	26.67
213	17.10	36.31	300	15.00	35.90	26.68	291	12.84	35.44	300	12.45	35.40	26.83
338	13.91	35.71	400	12.05	35.44	26.94	270	12.96	35.43	400	8.70	34.82	27.05
512	8.66	35.12	600	6.60	35.01	27.50	392	8.77	34.80	600	4.80	34.48	27.30
691	5.52	34.97	800	5.00	34.98	27.68	507	8.28	35.12	(800)	4.90	34.86	27.60
890	4.75	34.99	1,000	4.55	34.99	27.74	596	4.82	34.47	(1,000)	4.50	34.90	27.67
1,432	3.91	34.96					751	4.98	34.84				
Station 5483; May 30; latitude 41°16' N., longitude 50°16' W.; depth 3567 m.; dynamic height 971.391							Station 5487; May 31; latitude 40°07.5' N., longitude 47°46' W.; depth 4,024 m.; dynamic height 971.248						
0	18.29	35.60	0	18.29	35.60	25.68	0	14.45	34.71	0	14.45	34.71	25.89
24	18.10	35.58	25	18.05	35.58	25.72	28	13.25	35.34	25	13.30	35.27	26.56
47	16.90	35.50	50	16.80	35.51	25.97	54	13.54	35.52	50	13.50	35.51	26.71
70	15.94	35.87	75	15.75	35.86	26.48	82	13.56	35.56	75	13.55	35.55	26.72
93	15.14	35.77	100	14.90	35.73	26.57	108	13.57	35.56	100	13.55	35.56	26.73
140	13.76	35.46	150	13.75	35.49	26.63	163	13.69	35.64	150	13.65	35.63	26.76
187	13.97	35.62	200	13.95	35.63	26.70	217	13.56	35.63	200	13.60	35.64	26.78
280	13.46	35.65	300	12.90	35.58	26.88	325	10.63	35.34	300	11.45	35.42	27.04
275	13.55	35.66	400	10.10	35.21	27.12	415	7.90	35.01	400	8.25	35.05	27.30
404	9.96	35.20	600	6.70	35.01	27.49	622	5.10	34.93	600	5.25	34.93	27.61
529	7.67	35.05	800	5.05	34.99	27.68	832	4.32	34.94	800	4.40	34.94	27.71
677	5.79	35.00	1,000	4.45	34.98	27.74	1,045	4.19	34.97	1,000	4.25	34.97	27.76
1,075	4.30	34.98					1,587	3.68	34.94				
Station 5484; May 30; latitude 41°00' N., longitude 50°15' W.; depth 3,749 m.; dynamic height 971.369							Station 5488; May 31; latitude 40°27' N., longitude 48°22' W.; depth 3,530 m.; dynamic height 971.373						
0	17.37	35.40	0	17.37	35.40	25.75	0	20.87	36.24	0	20.87	36.24	25.49
28	17.37	35.42	25	17.37	35.42	25.76	26	14.13	34.55	25	14.15	34.55	25.82
56	14.44	35.21	50	15.00	35.24	26.18	51	17.18	35.66	50	17.15	35.60	25.96
84	13.79	35.37	75	13.90	35.31	26.47	77	17.87	36.37	75	17.85	36.32	26.34
112	13.98	35.54	100	13.90	35.46	26.58	103	17.79	36.38	100	17.80	36.38	26.40
168	13.80	35.56	150	13.85	35.56	26.67	153	17.34	36.36	150	17.40	36.36	26.48
224	13.51	35.56	200	13.65	35.56	26.71	204	14.06	35.66	200	14.30	35.70	26.68
336	12.21	35.53	300	12.80	35.55	26.88	307	10.91	35.30	300	11.15	35.32	27.02
413	10.02	35.26	400	10.35	35.31	27.15	235	13.45	35.56	400	8.15	34.96	27.24
606	6.42	35.01	600	6.50	35.01	27.52	338	10.48	35.23	600	6.70	35.02	27.50
794	4.75	34.96	800	4.75	34.96	27.69	432	7.01	34.82	800	4.95	34.99	27.69
995	4.42	34.98	1,000	4.40	34.98	27.74	554	7.22	35.03	(1,000)	4.40	34.96	27.73
1,502	3.66	34.90					882	4.60	34.98				

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t
Station 5489; May 31; latitude 40°45.5' N., longitude 48°46' W.; depth 3,658 m.; dynamic height 971.552								Station 5493; June 1; latitude 41°10' N., longitude 47°44' W.; depth 3,475 m.; dynamic height 971.124							
0	20.01	35.70		0	20.01	35.70	25.31	0	7.94	32.76		0	7.94	32.76	25.55
23	19.78	35.70		25	19.75	35.70	25.38	26	3.07	33.16		25	3.10	33.15	26.42
46	19.04	35.72		50	18.95	35.74	25.62	51	8.70	34.31		50	8.35	34.28	26.67
69	18.29	35.87		75	18.30	35.89	25.89	77	12.82	35.42		75	12.75	35.38	26.76
92	18.48	35.94		100	18.35	35.95	25.93	102	11.35	35.19		100	11.55	35.21	26.86
137	17.59	36.01		150	17.45	36.08	26.24	152	6.56	34.41		150	6.70	34.44	27.04
182	17.17	36.29		200	16.50	36.15	26.53	203	5.75	34.38		200	5.75	34.38	27.11
274	13.72	35.52		300	13.20	35.51	26.77	305	7.55	34.95		300	7.55	34.92	27.30
277	13.55	35.48		400	12.20	35.55	27.00	409	6.46	35.01		400	6.55	35.01	27.51
399	12.21	35.55		600	7.95	35.09	27.37	607	4.02	34.86		600	4.05	34.86	27.69
513	9.33	35.20		800	5.55	34.99	27.62	801	3.74	34.89		800	3.75	34.89	27.74
651	7.33	35.05		1,000	4.40	34.96	27.73	1,010	3.58	34.89		1,000	3.60	34.89	27.76
1,010	4.39	34.96						1,550	3.43	34.89					
Station 5490; May 31; latitude 41°18' N., longitude 49°25' W.; depth 3,475 m.; dynamic height 971.361								Station 5494; June 1; latitude 40°54.5' N., longitude 47°21' W.; depth 3,566 m.; dynamic height 971.345							
0	18.37	35.98		0	18.37	35.98	25.95	0	16.80	35.27		0	16.80	35.27	25.79
27	18.48	36.06		25	18.50	36.05	25.97	28	17.02	36.18		25	17.00	36.13	26.40
53	18.36	36.36		50	18.40	36.33	26.21	55	15.30	35.80		50	15.70	35.89	26.51
80	17.59	36.30		75	17.70	36.31	26.36	84	14.50	35.64		75	14.70	35.68	26.58
106	17.77	36.38		100	17.75	36.36	26.40	111	14.02	35.58		100	14.15	35.59	26.63
160	16.38	36.20		150	16.65	36.24	26.56	167	14.33	35.78		150	14.25	35.72	26.71
212	14.83	35.90		200	15.15	35.96	26.69	223	13.69	35.64		200	13.95	35.69	26.74
318	12.45	35.58		300	12.85	35.64	26.94	334	12.66	35.60		300	13.05	35.61	26.87
400	9.83	35.22		400	9.85	35.22	27.17	401	10.24	35.28		400	10.25	35.29	27.15
589	6.54	35.04		600	6.40	35.03	27.54	585	7.11	35.06		600	6.90	35.05	27.49
772	4.82	34.97		800	4.70	34.97	27.71	760	5.33	35.02		800	5.15	35.02	27.70
973	4.32	34.95		1,000	4.30	34.95	27.73	957	4.67	35.01		1,000	4.60	35.00	27.74
1,490	3.80	34.93						1,463	3.79	34.96					
Station 5491; May 31-June 1; latitude 41°50.5' N., longitude 49°13' W.; depth 3,200 m.; dynamic height 970.981								Station 5495; June 1; latitude 40°38' N., longitude 46°55' W.; depth 3,713 m.; dynamic height 971.608							
0	5.18	33.14		0	5.18	33.14	26.21	0	18.46	36.35		0	18.46	36.35	26.20
25	1.67	33.11		25	1.67	33.11	26.50	26	18.38	36.36		25	18.40	36.36	26.24
50	-0.67	33.42		50	-0.67	33.42	26.89	52	18.31	36.40		50	18.30	36.39	26.28
75	0.47	33.76		75	0.47	33.76	27.10	78	18.23	36.45		75	18.25	36.45	26.34
100	5.50	34.54		100	5.50	34.54	27.27	103	18.17	36.45		100	18.15	36.45	26.37
150	2.50	34.23		150	2.50	34.23	27.33	156	17.84	36.41		150	17.85	36.42	26.41
200	5.00	34.75		200	5.00	34.75	27.50	208	17.45	36.36		200	17.50	36.37	26.46
300	4.53	34.80		300	4.53	34.80	27.59	311	16.40	36.18		300	16.50	36.20	26.58
390	4.50	34.85		400	4.50	34.85	27.63	413	15.12	35.96		400	15.30	35.99	26.68
581	4.11	34.90		600	4.10	34.91	27.73	626	10.53	35.38		600	11.10	35.44	27.12
772	4.17	34.96		800	4.10	34.96	27.77	844	5.93	34.96		800	5.85	35.01	27.60
971	3.83	34.925		1,000	3.80	34.92	27.77	1,065	4.62	34.96		1,000	4.85	34.96	27.63
1,490	3.48	34.90						1,634	3.87	34.95					
Station 5492; June 1; latitude 41°34' N., longitude 48°18' W.; depth 3,566 m.; dynamic height 971.053								Station 5496; June 2; latitude 41°17.5' N., longitude 46°40' W.; depth 4,298 m.; dynamic height 971.668							
0	5.58	32.94		0	5.58	32.94	26.00	0	19.48	36.42		0	19.48	36.42	26.00
25	0.12	33.02		25	0.12	33.02	26.52	23	19.19	36.42		25	19.10	36.42	26.10
51	0.55	33.38		50	0.55	33.37	26.78	46	18.64	36.38		50	18.55	36.37	26.20
76	0.83	33.59		75	0.85	33.59	26.94	69	18.13	36.35		75	18.05	36.34	26.30
102	0.44	33.67		100	0.50	33.66	27.02	92	17.97	36.34		100	17.95	36.34	26.33
152	5.34	34.45		150	5.25	34.43	27.21	137	17.78	36.37		150	17.70	36.37	26.46
203	3.29	34.24		200	3.35	34.25	27.27	183	17.51	36.35		200	17.40	36.34	26.46
305	5.76	34.85		300	5.70	34.83	27.47	275	16.93	36.27		300	16.70	36.24	26.55
419	4.98	34.89		400	5.05	34.88	27.59	360	16.16	36.14		400	15.55	36.03	26.66
622	4.74	34.99		600	4.75	34.98	27.70	553	12.41	35.58		600	11.45	35.46	27.07
822	4.30	34.965		800	4.35	34.96	27.74	755	8.17	35.14		800	7.35	35.08	27.45
1,031	4.03	34.955		1,000	4.05	34.96	27.77	955	5.22	34.93		1,000	4.95	34.93	26.64
1,557	3.63	34.94						1,474	3.94	34.94					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5497; June 2; latitude 41°39' N., longitude 47°13' W.; depth 4,142 m.; dynamic height 971.200								Station 5501; June 2-3; latitude 43°22' N., longitude 48°50' W.; depth 1,646 m.; dynamic height 971.003							
0	10.68	33.00		0	10.68	33.00	25.30	0	3.83	32.86		0	3.83	32.86	26.12
25	7.93	33.74		25	7.93	33.74	26.32	25	1.59	32.86		25	1.59	32.86	26.31
52	12.23	35.08		50	11.90	35.03	26.65	50	-0.85	33.02		50	-0.85	33.02	26.56
77	13.41	35.48		75	13.30	35.45	26.70	75	-1.01	33.17		75	-1.01	33.17	26.69
103	13.51	35.54		100	13.50	35.54	26.73	101	-0.68	33.40		100	-0.70	33.40	26.87
154	10.85	35.06		150	11.00	35.10	26.87	151	0.86	34.01		150	0.85	34.01	27.28
206	11.39	35.42		200	11.35	35.39	27.03	201	1.44	34.26		200	1.45	34.25	27.43
309	8.76	35.12		300	9.05	35.15	27.24	302	3.87	34.76		300	3.75	34.76	27.64
384	5.69	34.72		400	5.60	34.73	27.41	398	4.15	34.89		400	4.15	34.89	27.70
578	5.18	34.93		600	5.10	34.94	27.63	592	3.83	34.90		600	3.80	34.90	27.75
965	4.45	34.99		800	4.75	34.98	27.70	781	3.53	34.88		800	3.50	34.88	27.76
1,450	3.78	34.935		1,000	4.40	34.99	27.75	981	3.45	34.88		1,000	3.45	34.88	27.76
								1,490	3.38	34.88					
Station 5498; June 2; latitude 42°00' N., longitude 47°49' W.; depth 3,749 m.; dynamic height 971.050								Station 5502; June 3; latitude 43°08' N., longitude 48°10' W.; depth 3,054 m.; dynamic height 971.113							
0	8.89	33.34		0	8.89	33.34	25.85	0	12.64	34.70		0	12.64	34.70	26.25
25	7.28	33.51		25	7.28	33.51	26.23	25	13.98	35.20		25	13.98	35.20	26.36
51	4.91	33.91		50	4.95	33.89	26.82	50	13.45	35.18		50	13.45	35.18	26.46
76	7.22	34.47		75	7.10	34.45	26.99	75	9.20	34.38		75	9.20	34.38	26.62
101	8.00	34.76		100	8.00	34.76	27.11	100	5.70	34.05		100	5.70	34.05	26.86
152	7.28	34.75		150	7.30	34.75	27.20	150	9.08	34.92		150	9.08	34.92	27.07
203	6.80	34.78		200	6.80	34.77	27.29	201	7.96	34.84		200	7.95	34.84	27.17
304	6.55	34.98		300	6.55	34.97	27.48	301	6.89	34.87		300	6.90	34.87	27.35
389	6.14	35.05		400	6.05	35.05	27.60	334	7.30	35.04		400	6.35	35.00	27.53
577	4.69	34.98		600	4.60	34.97	27.72	490	5.28	34.95		600	4.85	34.97	27.69
760	4.23	34.95		800	4.15	34.95	27.75	638	4.70	34.98		800	4.20	34.96	27.76
957	3.83	34.93		1,000	3.80	34.93	27.77	803	4.18	34.95		1,000	3.90	34.93	27.76
1,460	3.64	34.90						1,223	3.57	34.90					
Station 5499; June 2; latitude 42°22' N., longitude 48°27' W.; depth 3,200 m.; dynamic height 971.114								Station 5503; June 3; latitude 42°54' N., longitude 47°30' W.; depth 3,640 m.; dynamic height 971.062							
0	11.98	34.58		0	11.98	34.58	26.28	0	8.88	33.32		0	8.88	33.32	25.84
25	11.85	34.59		25	11.85	34.59	26.31	25	8.45	33.49		25	8.45	33.49	26.04
50	11.50	34.57		50	11.50	34.57	26.37	50	6.12	33.70		50	6.12	33.70	26.53
74	13.33	35.39		75	13.35	35.39	26.64	75	7.24	34.36		75	7.24	34.36	26.90
99	13.16	35.37		100	13.15	35.36	26.66	100	7.15	34.52		100	7.15	34.52	27.04
149	9.80	35.03		150	9.75	35.03	27.03	150	5.91	34.44		150	5.91	34.44	27.14
198	9.28	35.15		200	9.25	35.15	27.22	201	4.37	34.42		200	4.35	34.42	27.31
297	7.49	35.02		300	7.04	35.01	27.39	301	4.85	34.72		300	4.85	34.72	27.49
360	6.09	34.93		400	5.90	34.95	27.55	410	4.83	34.88		400	4.85	34.87	27.61
535	5.35	35.04		600	5.00	35.01	27.71	607	4.58	34.97		600	4.60	34.97	27.72
708	4.50	34.97		800	4.20	34.95	27.75	801	4.28	34.97		800	4.30	34.97	27.75
892	4.03	34.94		1,000	3.95	34.93	27.75	1,007	4.01	34.96		1,000	4.00	34.96	27.78
1,365	3.64	34.92						1,335	3.55	34.92					
Station 5500; June 2; latitude 42°48' N., longitude 49°10' W.; depth 2,250 m.; dynamic height 970.988								Station 5504; June 3; latitude 42°45.5' N., longitude 46°52' W.; depth 4,042 m.; dynamic height 971.268							
0	7.64	33.08		0	7.64	33.08	25.84	0	12.33	33.58		0	12.33	33.58	25.45
25	1.58	33.10		25	1.58	33.10	26.50	27	13.64	34.81		25	13.60	34.70	26.06
51	3.10	33.82		50	3.10	33.80	26.94	53	13.57	35.44		50	13.60	35.40	26.60
76	3.23	33.99		75	3.20	33.98	27.07	80	13.77	35.56		75	13.70	35.50	26.69
102	4.81	34.38		100	4.65	34.34	27.21	106	13.86	35.61		100	13.85	35.60	26.70
153	6.74	34.82		150	6.65	34.81	27.34	160	13.59	35.58		150	13.60	35.58	26.74
204	2.89	34.41		200	2.95	34.43	27.45	212	13.28	35.64		200	13.35	35.62	26.82
306	4.95	34.85		300	4.85	34.83	27.57	318	10.71	35.35		300	11.20	35.41	27.08
397	5.16	34.99		400	5.15	34.99	27.67	316	10.65	35.34		400	7.65	34.97	27.32
591	4.57	34.99		600	4.55	34.99	27.74	464	5.52	34.72		600	5.45	34.94	27.59
782	4.20	34.98		800	4.15	34.98	27.77	608	5.44	34.95		800	4.40	34.92	27.70
981	3.87	34.93		1,000	3.85	34.94	27.77	777	4.46	34.92		1,000	4.15	34.93	27.73
1,483	3.46	34.89						1,228	3.98	34.95					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, ° C.	Salinity, ‰		Depth, meters	Temperature, ° C.	Salinity, ‰	σ_t	Depth, meters	Temperature, ° C.	Salinity, ‰		Depth, meters	Temperature, ° C.	Salinity, ‰	σ_t
Station 5505; June 3; latitude 42°37.5' N., longitude 46°12' W.; depth 4,572 m.; dynamic height 971.608								Station 5509; June 4; latitude 43°30.5' N., longitude 46°22' W.; depth 2,561 m.; dynamic height 971.176							
0	19.33	36.37	0	19.33	36.37	26.01		0	12.21	33.91	0	12.21	33.91	25.73	
26	19.27	36.37	25	19.30	36.37	26.01		24	9.89	33.83	25	9.90	33.83	26.08	
51	18.25	36.29	50	18.30	36.29	26.21		48	11.30	34.82	50	11.45	34.91	26.65	
78	17.88	36.36	75	17.90	36.35	26.34		72	13.22	35.43	75	13.25	35.46	26.72	
103	17.70	36.38	100	17.75	36.38	26.41		96	13.48	35.54	100	13.45	35.53	26.73	
155	17.10	36.27	150	17.15	36.28	26.48		145	12.11	35.36	150	11.80	35.32	26.90	
206	16.66	36.19	200	16.70	36.20	26.53		193	9.23	34.92	200	8.90	34.88	27.06	
309	15.71	36.07	300	15.75	36.08	26.64		289	6.08	34.60	300	6.10	34.61	27.25	
393	14.89	35.96	400	14.80	35.95	26.76		396	7.09	34.99	400	7.05	34.99	27.42	
577	11.05	35.40	600	10.55	35.33	27.13		577	4.09	34.80	600	4.05	34.81	27.65	
754	7.27	35.04	800	6.60	35.02	27.51		748	4.01	34.90	800	3.95	34.90	27.73	
949	5.54	35.00	1,000	5.25	35.00	27.67		945	3.67	34.89	1,000	3.65	34.89	27.75	
1,450	4.07	34.96						1,458	3.42	34.89					
Station 5506; June 3; latitude 42°54' N., longitude 45°46' W.; depth 4,755 m.; dynamic height 971.632								Station 5510; June 4; latitude 43°44.5' N., longitude 47°04' W.; depth 4,042 m.; dynamic height 971.007							
0	17.65	36.34	0	17.65	36.34	26.40		0	6.18	33.12	0	6.18	33.12	26.07	
26	17.45	36.32	25	17.45	36.32	26.43		23	5.40	33.21	25	5.25	33.22	26.26	
51	17.44	36.32	50	17.45	36.32	26.43		45	2.96	33.25	50	2.85	33.30	26.56	
77	17.44	36.32	75	17.45	36.32	26.43		68	2.47	33.61	75	2.10	33.64	26.90	
102	16.98	36.24	100	17.00	36.25	26.48		90	1.26	33.70	100	1.60	33.80	27.06	
155	16.88	36.26	150	16.85	36.26	26.53		135	3.49	34.35	150	4.15	34.50	27.39	
206	16.69	36.26	200	16.70	36.26	26.57		180	5.30	34.73	200	5.10	34.73	27.47	
308	16.44	36.22	300	16.45	36.23	26.60		270	4.13	34.73	300	3.75	34.71	27.60	
367	15.98	36.13	400	15.45	36.04	26.68		312	3.69	34.71	400	4.35	34.86	27.66	
543	12.71	35.62	600	11.45	35.46	27.07		481	4.70	34.98	600	4.25	34.94	27.73	
714	8.99	35.16	800	7.40	35.05	27.42		658	4.09	34.93	800	4.05	34.94	27.75	
890	6.30	35.00	1,000	5.50	34.99	27.62		849	4.04	34.94	1,000	3.95	34.94	27.76	
1,370	4.13	34.94						1,371	3.55	34.92					
Station 5507; June 3; latitude 43°10.5' N., longitude 45°21' W.; depth 4,663 m.; dynamic height 971.621								Station 5511; June 4; latitude 43°56' N., longitude 47°38' W.; depth 3,841 m.; dynamic height 971.120							
0	18.58	36.33	0	18.52	36.33	26.16		0	10.46	34.30	0	10.46	34.30	26.35	
24	18.58	36.34	25	18.55	36.34	26.18		20	10.40	34.60	25	10.40	34.60	26.59	
48	18.04	36.34	50	18.00	36.34	26.32		40	10.16	34.60	50	10.20	34.60	26.62	
72	17.76	36.32	75	17.70	36.32	26.37		74	10.18	34.74	75	10.20	34.75	26.74	
97	17.57	36.32	100	17.55	36.32	26.41		98	10.67	35.02	100	10.65	35.02	26.87	
144	16.97	36.23	150	16.90	36.23	26.50		148	10.11	35.00	150	10.05	35.00	26.96	
192	16.74	36.22	200	16.70	36.22	26.54		197	9.13	35.00	200	9.05	35.00	27.13	
289	16.34	36.19	300	16.25	36.18	26.61		295	6.37	34.78	300	6.35	34.78	27.35	
337	15.97	36.12	400	15.05	35.96	26.72		435	5.92	34.92	400	6.00	34.89	27.48	
498	13.23	35.67	600	10.70	35.36	27.13		651	4.47	34.94	600	4.75	34.94	27.67	
655	9.45	35.20	800	7.25	35.06	27.45		868	4.10	34.95	800	4.20	34.95	27.75	
824	6.99	35.05	1,000	5.55	35.04	27.66		1,090	3.83	34.94	1,000	3.95	34.94	27.76	
1,250	4.57	35.02						1,651	3.53	34.92					
Station 5508; June 4; latitude 43°22' N., longitude 45°55' W.; depth 4,390 m.; dynamic height 971.389								Station 5512; June 4; latitude 44°03.5' N., longitude 48°14' W.; depth 3,457 m.; dynamic height 971.027							
0	19.28	36.26	0	19.28	36.26	25.93		0	5.58	33.10	0	5.58	33.10	26.12	
19	19.26	36.24	25	19.00	36.23	25.98		27	6.17	33.66	25	6.15	33.62	26.47	
36	18.12	36.21	50	16.80	36.07	26.40		53	6.89	34.04	50	6.80	34.00	26.68	
55	16.44	36.03	75	16.75	36.06	26.40		80	7.76	34.60	75	7.55	34.50	26.97	
73	16.52	36.06	100	16.10	36.03	26.53		106	8.93	34.89	100	8.75	34.85	27.06	
110	15.95	36.01	150	15.30	35.93	26.64		160	5.67	34.48	150	6.15	34.55	27.20	
146	15.42	35.94	200	14.10	35.68	26.71		212	6.26	34.76	200	6.10	34.69	27.31	
219	13.67	35.59	300	13.25	35.60	26.82		318	4.01	34.68	300	4.15	34.69	27.54	
286	13.64	35.65	400	10.40	35.21	27.07		407	4.20	34.82	400	4.15	34.81	27.64	
413	10.09	35.16	600	5.35	34.79	27.49		605	4.57	34.99	600	4.55	34.99	27.74	
530	6.44	34.785	800	4.55	34.87	27.65		802	4.13	34.95	800	4.15	34.95	27.75	
673	4.87	34.81	1,000	4.40	34.96	27.73		1,009	3.82	34.93	1,000	3.85	34.93	27.76	
1,053	4.34	34.97						1,539	3.49	34.91					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5513; June 4-5; latitude 44°11' N., longitude 48°50' W.; depth 2,103 m.; dynamic height 970.948								Station 5519; June 5; latitude 44°58.5' N., longitude 48°57' W.; depth 659 m.; dynamic height 971.041							
0	2.39	33.12		0	2.39	33.12	26.46	0	2.09	32.88		0	2.09	32.88	26.29
25	2.36	33.11		25	2.36	33.11	26.45	25	0.89	32.98		25	0.89	32.98	26.45
50	1.93	33.22		50	1.93	33.22	26.58	49	0.70	33.16		50	0.70	33.17	26.61
75	0.47	33.80		75	0.47	33.80	27.13	74	-0.49	33.49		75	-0.50	33.49	26.93
101	0.88	34.04		100	0.90	34.04	27.30	98	0.14	33.69		100	0.15	33.71	27.08
150	2.79	34.44		150	2.80	34.44	27.47	147	0.64	33.94		150	0.65	33.95	27.24
200	3.79	34.69		200	3.80	34.69	27.58	196	0.75	34.02		200	0.75	34.03	27.30
301	4.00	34.79		300	4.00	34.79	27.64	294	1.27	34.26		300	1.30	34.28	27.46
404	3.99	34.83		400	4.00	34.83	27.67	306	1.85	34.42		400	2.10	34.48	27.56
602	3.70	34.92		600	3.70	34.91	27.77	545	2.98	34.70		600	3.10	34.75	27.70
799	3.43	34.89		800	3.45	34.89	27.77								
1,006	3.36	34.89		1,000	3.35	34.89	27.78								
1,536	3.32	34.90													
Station 5514; June 5; latitude 44°13' N., longitude 48°58' W.; depth 531 m.; dynamic height 971.016								Station 5520; June 5; latitude 44°56.5' N., longitude 48°44' W.; depth 1,646 m.; dynamic height 970.934							
0	2.39	32.90		0	2.39	32.90	26.28	0	3.10	33.12		0	3.10	33.12	26.40
25	0.17	33.05		25	0.17	33.05	26.54	27	1.86	33.24		25	1.95	33.23	26.58
51	0.21	33.29		50	0.20	33.29	26.73	53	1.15	33.50		50	1.15	33.46	26.82
76	-0.25	33.49		75	-0.25	33.48	26.91	80	1.48	33.94		75	1.40	33.86	27.12
103	0.22	33.72		100	0.15	33.70	27.07	106	2.09	34.24		100	2.00	34.18	27.33
153	0.58	33.91		150	0.55	33.90	27.21	160	2.83	34.52		150	2.70	34.46	27.50
204	0.89	34.05		200	0.90	34.03	27.29	213	4.18	34.76		200	3.90	34.71	27.59
307	2.18	34.50		300	2.10	34.46	27.55	319	3.88	34.83		300	3.90	34.82	27.68
322	2.47	34.59		400	2.80	34.64	27.63	404	3.85	34.86		400	3.85	34.86	27.71
518	3.04	34.70						606	3.85	34.90		600	3.85	34.90	27.74
								809	3.51	34.89		800	3.50	34.89	27.77
								1,017	3.45	34.89		1,000	3.45	34.89	27.77
								1,543	3.35	34.89					
Station 5515; June 5; latitude 44°14' N., longitude 49°05' W.; depth 187 m.; dynamic height 971.067								Station 5521; June 5; latitude 44°54.5' N., longitude 48°30' W.; depth 2,689 m.; dynamic height 970.919							
0	1.77	32.84		0	1.77	32.84	26.29	0	4.08	33.21		0	4.08	33.21	26.38
26	0.28	32.99		25	0.35	32.99	26.49	27	1.04	33.27		25	1.10	33.26	26.66
53	-0.82	33.16		50	-0.80	33.14	26.66	53	0.88	33.92		50	0.90	33.84	27.14
79	-0.71	33.32		75	-0.70	33.30	26.78	80	1.72	34.17		75	1.55	34.13	27.32
105	-0.81	33.34		100	-0.80	33.33	26.81	107	2.33	34.34		100	2.15	34.30	27.42
157	-0.57	33.46		150	-0.60	33.44	26.89	161	5.34	34.86		150	4.90	34.79	27.54
Station 5516; June 5; latitude 44°16' N., longitude 49°12' W.; depth 59 m.; dynamic height 971.072								214	4.87	34.84		200	5.00	34.85	27.58
0	1.75	32.84		0	1.75	32.84	26.29	321	4.46	34.88		300	4.50	34.87	27.65
27	0.27	32.99		25	0.35	32.98	26.48	390	4.40	34.91		400	4.35	34.91	27.70
49	-0.07	33.08		50	-0.10	33.08	26.58	605	3.85	34.92		600	3.85	34.92	27.76
								834	3.67	34.91		800	3.70	34.91	27.77
								1,048	3.51	34.88		1,000	3.55	34.90	27.77
								1,594	3.39	34.88					
Station 5517; June 5; latitude 45°00.5' N., longitude 49°13' W.; depth 64 m.; dynamic height 971.083								Station 5522; June 5; latitude 44°50' N., longitude 47°57' W.; depth 3,292 m.; dynamic height 970.959							
0	2.62	32.84		0	2.62	32.84	26.22	0	6.29	33.50		0	6.29	33.50	26.35
27	-0.12	32.96		25	-0.05	32.95	26.48	24	5.49	33.56		25	5.50	33.56	26.50
55	-0.26	32.99		50	-0.25	32.98	26.51	49	5.35	33.66		50	5.35	33.68	26.61
								73	3.76	34.00		75	3.80	34.03	27.05
								97	4.00	34.24		100	4.10	34.27	27.22
								146	4.61	34.54		150	4.60	34.55	27.38
								195	3.93	34.61		200	3.95	34.62	27.51
								292	4.51	34.87		300	4.50	34.87	27.65
								381	4.25	34.91		400	4.25	34.91	27.71
								568	3.98	34.93		600	3.90	34.92	27.76
								753	3.56	34.90		800	3.50	34.89	27.77
								946	3.45	34.89		1,000	3.45	34.89	27.77
								1,436	3.38	34.90					
Station 5518; June 5; latitude 44°59.5' N., longitude 49°05' W.; depth 98 m.; dynamic height 971.076															
0	2.15	32.86		0	2.15	32.86	26.27								
27	-0.28	33.10		25	-0.25	33.09	26.59								
53	-0.63	33.21		50	-0.60	33.20	26.70								
80	-0.57	33.22		75	-0.60	33.22	26.71								

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5523; June 5-6; latitude 44°45' N., longitude 47°19' W.; depth 3,795 m.; dynamic height 971.018							Station 5527; June 7; latitude 44°19.5' N., longitude 44°34' W.; depth 4,572 m.; dynamic height 970.985						
0	6.25	33.30	0	6.25	33.30	26.20	0	7.46	33.45	0	7.46	33.45	26.16
23	3.63	33.22	25	3.65	33.23	26.43	25	6.36	33.46	25	6.36	33.46	26.32
46	4.83	33.47	50	5.25	33.71	26.65	49	4.70	33.72	50	4.70	33.74	26.73
69	7.64	34.57	75	7.85	34.64	27.03	74	4.55	34.08	75	4.55	34.09	27.02
92	8.08	34.73	100	8.00	34.75	27.10	99	4.75	34.30	100	4.75	34.30	27.17
137	7.09	34.80	150	6.80	34.79	27.30	148	4.17	34.44	150	4.15	34.45	27.35
184	5.98	34.74	200	5.65	34.74	27.41	197	4.17	34.60	200	4.15	34.60	27.47
276	4.63	34.75	300	4.70	34.78	27.55	296	4.22	34.77	300	4.20	34.78	27.61
334	4.76	34.82	400	4.65	34.87	27.64	400	4.44	34.92	400	4.45	34.92	27.70
500	4.34	34.90	600	4.05	34.89	27.71	593	4.12	34.93	600	4.10	34.93	27.74
666	3.92	34.88	800	3.80	34.89	27.74	780	4.09	34.93	800	4.05	34.93	27.74
850	3.73	34.89	1,000	3.65	34.89	27.75	965	3.69	34.91	1,000	3.65	34.91	27.77
1,341	3.40	34.89					1,411	3.41	34.89				
Station 5524; June 6; latitude 44°38' N., longitude 46°28' W.; depth 3,573 m.; dynamic height 971.007							Station 5528; June 7; latitude 44°49' N., longitude 44°34' W.; depth 4,481 m.; dynamic height 971.016						
0	7.07	33.46	0	7.07	33.46	26.22	0	7.84	33.45	0	7.84	33.45	26.10
24	7.53	33.90	25	7.55	33.91	26.50	25	6.23	33.51	25	6.23	33.51	26.37
50	8.67	34.69	50	8.70	34.69	26.94	50	6.42	33.76	50	6.42	33.76	26.54
74	8.82	34.79	75	8.85	34.79	27.00	75	4.41	33.83	75	4.41	33.83	26.83
100	9.12	34.89	100	9.10	34.89	27.03	100	4.31	34.12	100	4.31	34.12	27.08
149	7.49	34.80	150	7.45	34.80	27.22	150	4.96	34.48	150	4.96	34.48	27.29
198	5.95	34.77	200	5.90	34.77	27.41	199	4.44	34.50	200	4.40	34.50	27.37
298	4.95	34.79	300	4.90	34.79	27.54	299	3.85	34.65	300	3.85	34.65	27.54
415	3.62	34.73	400	3.75	34.73	27.61	388	4.11	34.83	400	4.10	34.85	27.68
610	4.08	34.92	600	4.10	34.92	27.74	576	4.16	34.93	600	4.15	34.93	27.73
797	3.82	34.92	800	3.80	34.92	27.77	760	3.83	34.92	800	3.85	34.92	27.76
1,001	3.54	34.90	1,000	3.55	34.90	27.77	955	3.82	34.93	1,000	3.80	34.93	27.77
1,517	3.32	34.88					1,450	3.55	34.90				
Station 5525; June 6; latitude 44°32.5' N., longitude 45°46' W.; depth 3,804 m.; dynamic height 971.017							Station 5529; June 7; latitude 44°49' N., longitude 43°53' W.; depth 4,036 m.; dynamic height 971.048						
0	6.92	33.47	0	6.92	33.47	26.25	0	10.01	34.13	0	10.01	34.13	26.29
25	5.23	33.45	25	5.23	33.45	26.44	25	9.96	34.47	25	9.96	34.47	26.57
50	5.61	33.58	50	5.61	33.58	26.50	50	8.56	34.29	50	8.56	34.29	26.65
75	2.70	33.57	75	2.70	33.57	26.80	76	6.84	34.28	75	6.85	34.28	26.89
101	0.96	33.68	100	0.95	33.67	27.00	101	6.51	34.40	100	6.50	34.39	27.02
151	2.04	34.14	150	2.05	34.13	27.29	151	6.63	34.63	150	6.65	34.62	27.19
201	2.30	34.35	200	2.25	34.34	27.44	202	6.41	34.74	200	6.40	34.74	27.31
302	4.55	34.80	300	4.55	34.79	27.58	303	5.12	34.77	300	5.15	34.77	27.27
387	4.35	34.86	400	4.35	34.87	27.67	401	4.80	34.83	400	4.80	34.83	27.58
578	4.47	34.96	600	4.45	34.95	27.72	595	4.45	34.92	600	4.45	34.92	27.70
767	3.89	34.89	800	3.85	34.89	27.73	784	4.13	34.94	800	4.10	34.94	27.75
966	3.74	34.92	1,000	3.70	34.92	27.78	984	3.84	34.92	1,000	3.85	34.92	27.76
1,473	3.45	34.91					1,490	3.46	34.90				
Station 5526; June 7; latitude 44°25.5' N., longitude 45°16' W.; depth 3,573 m.; dynamic height 971.040							Station 5530; June 7; latitude 45°19' N., longitude 44°00' W.; depth 4,390 m.; dynamic height 971.082						
0	10.39	34.36	0	10.39	34.36	26.40	0	10.05	33.87	0	10.05	33.87	26.08
25	11.50	34.80	25	11.50	34.80	26.55	25	11.25	34.60	25	11.25	34.60	26.43
51	10.13	34.74	50	10.20	34.74	26.73	50	12.68	35.12	50	12.68	35.12	26.57
76	6.56	34.28	75	6.60	34.28	26.92	75	12.22	35.25	75	12.22	35.25	26.76
102	7.10	34.58	100	7.10	34.56	27.08	100	10.19	34.94	100	10.19	34.94	26.89
152	6.45	34.58	150	6.45	34.58	27.18	150	9.07	34.95	150	9.07	34.95	27.08
202	6.57	34.80	200	6.55	34.79	27.33	201	8.54	35.02	200	8.55	35.02	27.23
304	5.13	34.77	300	5.15	34.77	27.50	301	4.43	34.59	300	4.45	34.59	27.43
415	4.79	34.86	400	4.80	34.84	27.59	407	5.42	34.94	400	5.40	34.93	27.59
615	4.42	34.94	600	4.45	34.94	27.71	599	4.30	34.93	600	4.30	34.93	27.71
810	4.02	34.92	800	4.05	34.92	27.74	784	3.97	34.90	800	3.95	34.90	27.73
1,017	3.73	34.91	1,000	3.75	34.91	27.76	981	3.65	34.90	1,000	3.65	34.90	27.76
1,544	3.38	34.88					1,473	3.32	34.88				

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5531; June 8; latitude 45°19' N., longitude 44°44' W.; depth 4,481 m.; dynamic height 971.120								Station 5535; June 8; latitude 45° 20' N., longitude 47°23' W.; depth 2,834 m.; dynamic height 970.979							
0	8.09	33.43		0	8.09	33.43	26.04	0	6.99	33.46		0	6.99	33.46	26.23
25	10.81	34.55		25	10.81	34.55	26.48	27	5.45	33.47		25	5.50	33.47	26.43
50	12.25	35.02		50	12.25	35.02	26.58	53	5.14	33.74		50	5.15	33.70	26.65
75	12.86	35.37		75	12.86	35.37	26.73	80	3.97	34.06		75	4.10	34.00	27.00
100	11.93	35.25		100	11.93	35.25	26.82	106	4.16			100	4.10	34.24	27.19
150	9.21	34.86		150	9.21	34.86	27.00	160	3.86	34.53		150	3.90	34.50	27.42
201	8.40	34.84		200	8.40	34.84	27.10	214	4.29	34.69		200	4.25	34.65	27.50
301	4.66	34.51		300	4.70	34.51	27.34	320	4.08	34.80		300	4.10	34.78	27.62
399	5.02	34.74		400	5.05	34.74	27.48	417	4.23	34.88		400	4.20	34.86	27.68
				(600)	4.25	34.89	27.69	621	3.75	34.89		600	3.80	34.89	27.74
				(800)	3.95	34.92	27.75	823	3.59	34.88		800	3.60	34.88	27.75
				(1,000)	3.80	34.93	27.77	1,034	3.45	34.86		1,000	3.45	34.86	27.75
								1,574	3.33	34.88					
Station 5532; June 8; latitude 45°19' N., longitude 45°28' W.; depth 3,768 m.; dynamic height 971.088								Station 5536; June 8; latitude 45°34' N., longitude 47°51' W.; depth 1,500 m.; dynamic height 970.945							
0	11.43	34.68		0	11.43	34.68	26.47	0	4.72	33.34		0	4.72	33.34	26.41
25	11.37	34.94		25	11.37	34.94	26.69	25	2.18	33.33		25	2.18	33.33	26.64
50	11.32	35.00		50	11.32	35.00	26.73	52	1.13	33.48		50	1.15	33.46	26.82
75	11.12	34.99		75	11.12	34.99	26.77	77	2.30	33.98		75	2.15	33.94	27.13
101	10.88	35.03		100	10.90	35.03	26.83	104	3.27	34.32		100	3.15	34.27	27.31
150	9.34	34.93		150	9.35	34.93	27.02	154	3.63	34.51		150	3.60	34.49	27.44
200	8.27	34.88		200	8.25	34.88	27.16	206	3.71	34.65		200	3.75	34.63	27.53
301	5.59	34.70		300	5.60	34.70	27.39	310	4.35	34.85		300	4.35	34.84	27.64
354	4.16	34.64		400	4.25	34.70	27.54	424	3.47	34.82		400	3.60	34.82	27.71
530	4.52	34.90		600	4.30	34.90	27.69	628	3.53	34.85		600	3.50	34.85	27.74
708	4.00	34.90		800	3.85	34.90	27.74	827	3.49	34.88		800	3.50	34.88	27.76
898	3.78	34.90		1,000	3.70	34.90	27.76	1,038	3.39	34.88		1,000	3.40	34.88	27.77
1,398	3.38	34.89						1,427	3.32	34.87					
Station 5533; June 8; latitude 45°21.5' N., longitude 46°02' W.; depth 3,429 m.; dynamic height 970.958								Station 5537; June 8-9; latitude 45°40.5' N., longitude 48°05' W.; depth 649 m.; dynamic height 970.949							
0	8.02	33.81		0	8.02	33.81	26.36	0	3.66	33.01		0	3.66	33.01	26.26
26	6.37	33.80		25	6.40	33.80	26.58	24	1.59	33.54		25	1.60	33.55	26.86
51	5.88	33.86		50	5.90	33.86	26.69	48	1.85	33.84		50	1.85	33.85	27.08
77	3.42	34.01		75	3.45	34.00	27.07	71	0.93	33.97		75	0.95	34.00	27.26
102	3.74	34.22		100	3.70	34.20	27.20	95	1.03	34.11		100	1.10	34.13	27.36
155	4.17	34.54		150	4.10	34.51	27.41	143	1.47	34.26		140	1.55	34.28	27.44
206	5.15	34.85		200	5.10	34.83	27.55	190	1.72	34.39		200	1.75	34.40	27.53
308	4.64	34.87		300	4.70	34.87	27.63	285	2.06	34.50		300	2.15	34.52	27.60
384	4.55	34.95		400	4.50	34.95	27.71	361	2.57	34.62		400	2.80	34.67	27.66
572	4.00	34.94		600	3.95	34.93	27.75	549	3.18	34.76		(600)	3.25	34.77	27.70
759	3.65	34.90		800	3.60	34.89	27.76								
958	3.38	34.88		1,000	3.40	34.88	27.77								
1,474	3.29	34.87													
Station 5534; June 8; latitude 45°21.5' N., longitude 46°42' W.; depth 3,109 m.; dynamic height 970.973								Station 5538; June 9; latitude 45°45.5' N., longitude 48°14' W.; depth 167 m.; dynamic height 970.998							
0	8.03	33.77		0	8.03	33.77	26.32	0	2.60	32.70		0	2.60	32.70	26.10
26	6.56	33.87		25	6.60	33.87	26.61	26	1.15	33.06		25	1.20	33.05	26.49
51	5.93	34.00		50	5.95	33.99	26.78	52	-1.20	33.32		50	-1.15	33.03	26.80
77	4.45	34.12		75	4.45	34.11	27.05	78	-0.44	33.64		75	-0.55	33.60	27.02
102	4.44	34.22		100	4.45	34.21	27.13	104	0.41	33.89		100	0.35	33.87	27.20
153	4.28	34.47		150	4.30	34.45	27.34	155	0.65	33.96		150	0.65	33.95	27.24
204	4.26	34.63		200	4.30	34.62	27.48								
306	4.35	34.81		300	4.35	34.80	27.61								
390	4.48	34.92		400	4.45	34.92	27.70								
581	3.96	34.90		600	3.90	34.90	27.74								
771	3.71	34.90		800	3.70	34.90	27.76								
974	3.55	34.90		1,000	3.55	34.90	27.77								
1,495	3.38	34.90													
Station 5539; June 9; latitude 45°48' N., longitude 48°20' W.; depth 110 m.; dynamic height 971.024								Station 5539; June 9; latitude 45°48' N., longitude 48°20' W.; depth 110 m.; dynamic height 971.024							
0	2.48	32.81		0	2.48	32.81	26.21	0	2.48	32.81		0	2.48	32.81	26.21
25	-0.63	32.88		25	-0.63	32.88	26.44	25	-0.63	32.88		25	-0.63	32.88	26.44
51	-1.23	33.09		50	-1.20	33.07	26.62	51	-1.23	33.09		50	-1.20	33.07	26.62
76	-1.14	33.19		75	-1.15	33.18	26.70	76	-1.14	33.19		75	-1.15	33.18	26.70
102	-0.90	33.37		100	-0.90	33.35	26.84	102	-0.90	33.37		100	-0.90	33.35	26.84

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5540; June 9; latitude 45°52' N., longitude 48°28' W.; depth 95 m.; dynamic height 971.026								Station 5547; June 9; latitude 46°08.5' N., longitude 47°14' W.; depth 1,463 m.; dynamic height 970.910							
0	3.69	32.72		0	3.69	32.72	26.03	0	3.35	33.32		0	3.35	33.32	26.53
26	0.14	32.95		25	0.30	32.93	26.45	27	1.72	33.57		25	1.85	33.55	26.85
52	-1.04	33.11		50	-1.00	33.10	26.63	53	1.18	33.82		50	1.20	33.80	27.09
78	-0.93	33.24		75	-0.95	33.22	26.73	79	1.26	34.00		75	1.25	33.97	27.22
								105	1.53	34.26		100	1.45	34.21	27.40
								159	2.27	34.51		150	2.20	34.48	27.56
								211	2.56	34.60		200	2.50	34.58	27.61
								316	3.10	34.73		300	3.05	34.71	27.67
								425	3.33	34.82		400	3.30	34.80	27.72
								629	3.48	34.87		600	3.50	34.85	27.74
								830	3.45	34.88		800	3.45	34.88	27.76
								1,044	3.43	34.88		1,000	3.45	34.88	27.76
								1,482	3.36	34.88					
Station 5541; June 9; latitude 45°59' N., longitude 48°42' W.; depth 80 m.; dynamic height 971.042															
0	4.27	32.64		0	4.27	32.64	25.91								
26	2.11	32.78		25	2.20	32.78	26.20								
52	1.11	32.87		50	1.20	32.86	26.34								
67	-0.93	33.05		(75)	-1.10	33.13	26.66								
Station 5542; June 9; latitude 46°13' N., longitude 49°06' W.; depth 67 m.; dynamic height 971.053								Station 5548; June 9; latitude 46°07' N., longitude 46°37' W.; depth 503 m.; dynamic height 970.940							
0	5.15	32.50		0	5.15	32.50	25.70	0	5.36	33.37		0	5.36	33.37	26.36
26	3.62	32.56		25	3.70	32.56	25.90	26	4.44	33.51		25	4.45	33.50	26.57
53	0.65	32.85		50	1.00	32.82	26.32	52	3.60	34.07		50	3.65	34.03	27.07
								79	4.28	34.33		75	4.15	34.29	27.22
								105	5.25	34.61		100	5.15	34.57	27.34
								156	4.55	34.62		150	4.65	34.62	27.44
								209	4.66	34.80		200	4.65	34.77	27.56
								314	4.77	34.91		300	4.80	34.91	27.65
								390	4.22	34.91		400	4.15	34.91	27.72
								476	3.95	34.90					
Station 5543; June 9; latitude 46°11' N., longitude 48°35' W.; depth 88m.; dynamic height 971.037															
0	4.41	32.70		0	4.41	32.70	25.94								
26	1.66	32.78		25	1.75	32.78	26.24								
51	0.46	32.85		50	0.55	32.85	26.36								
77	-0.97	33.12		75	-0.80	33.10	26.62								
Station 5544; June 9; latitude 46°10' N., longitude 47°59' W.; depth 117 m.; dynamic height 971.025								Station 5549; June 10; latitude 46°05' N., longitude 45°52' W.; depth 1,737 m.; dynamic height 970.949							
0	3.53	32.71		0	3.53	32.71	26.03	0	4.48	33.33		0	4.48	33.33	26.42
26	0.93	32.75		25	1.00	32.75	26.26	25	2.91	33.36		25	2.91	33.36	26.61
51	-1.15	33.03		50	-1.10	33.02	26.58	50	3.32	33.63		50	3.32	33.63	26.78
77	-1.03	33.25		75	-1.05	33.24	26.75	74	3.81	34.16		75	3.85	34.16	27.16
103	-0.73	33.45		100	-0.80	33.43	26.89	99	3.98	34.36		100	4.00	34.36	27.30
								149	4.02	34.58		150	4.05	34.58	27.46
								198	4.33	34.74		200	4.35	34.74	27.56
								297	4.11	34.83		300	4.10	34.83	27.66
								406	3.61	34.81		400	3.65	34.81	27.69
								606	3.63	34.86		600	3.65	34.86	27.73
								804	3.53	34.87		800	3.55	34.87	27.75
								1,008	3.40	34.88		1,000	3.40	34.88	27.77
								1,525	3.30	34.89					
Station 5545; June 9; latitude 46°09.5' N., longitude 47°48' W.; depth 176 m.; dynamic height 970.996															
0	3.15	32.74		0	3.15	32.74	26.10								
24	0.28	33.07		25	0.25	33.08	26.57								
49	-1.53	33.26		50	-1.50	33.26	26.78								
73	-0.68	33.51		75	-0.65	33.53	26.97								
97	0.23	33.81		100	0.30	33.83	27.16								
146	0.72	33.99		150	0.75	34.00	27.28								
Station 5546; June 9; latitude 46°09' N., longitude 47°30' W.; depth 652 m.; dynamic height 970.971								Station 5550; June 10; latitude 46°03' N., longitude 45°10' W.; depth 3,146 m.; dynamic height 970.971							
0	3.76	32.78		0	3.76	32.78	26.07	0	5.99	33.57		0	5.99	33.57	26.45
25	-0.16	33.06		25	-0.16	33.06	26.57	25	5.43	33.67		25	5.43	33.67	26.60
50	-0.32	33.30		50	-0.32	33.30	26.76	50	3.27	33.57		50	3.27	33.57	26.74
75	-0.93	33.52		75	-0.93	33.52	26.98	76	3.32	33.67		75	3.35	33.67	26.82
99	0.01	33.75		100	0.05	33.76	27.13	101	3.93	34.15		100	3.90	34.14	27.13
149	1.11	34.15		150	1.15	34.16	27.38	151	4.29			150	4.30	34.15	27.39
199	2.13	34.42		200	2.15	34.42	27.52	202	4.01	34.64		200	4.00	34.63	27.51
298	2.64	34.63		300	2.65	34.63	27.64	303	4.69	34.89		300	4.70	34.88	27.63
377	3.17	34.76		400	3.25	34.77	27.70	408	4.58	34.95		400	4.65	34.95	27.70
565	3.35	34.81		(600)	3.35	34.81	27.72	610	4.03	34.93		600	4.05	34.93	27.74
								810	3.80	34.93		800	3.80	34.93	27.77
								1,016	3.62	34.90		1,000	3.65	34.91	27.77
								1,542	3.45	34.91					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5551; June 10; latitude 46°02' N., longitude 44°40' W., depth 3,585 m.; dynamic height 970.894							Station 5556; June 10; latitude 46°48' N., longitude 44°58' W.; depth 176 m.; dynamic height 970.939						
0	5.05	33.86	0	5.05	33.86	26.79	0	6.43	33.83	0	6.43	33.83	26.59
27	4.60	33.96	25	4.65	33.95	26.90	25	5.05	33.86	25	5.05	33.86	26.79
53	3.78	34.12	50	3.90	34.10	27.10	50	4.62	33.86	50	4.62	33.86	26.83
80	3.31	34.24	75	3.35	34.21	27.24	75	4.12	34.01	75	4.12	34.01	27.01
106	3.24	34.47	100	3.25	34.40	27.40	99	3.64	34.15	100	3.65	34.16	27.18
160	3.01	34.60	150	3.05	34.57	27.56	149	3.83	34.41	150	3.85	34.42	27.36
213	3.90	34.81	200	3.70	34.77	27.66							
319	3.16	34.78	300	3.30	34.78	27.70							
419	3.34	34.83	400	3.30	34.81	27.73							
618	3.72	34.91	600	3.70	34.90	27.76							
812	3.43	34.88	800	3.45	34.88	27.76							
1,014	3.33	34.87	1,000	3.35	34.87	27.77							
1,520	3.31	34.89											
Station 5552; June 10; latitude 46°20.5' N., longitude 44°48' W.; depth 2,195 m.; dynamic height 970.884							Station 5557; June 10; latitude 46°47.5' N., longitude 45°14' W.; depth 222 m.; dynamic height 970.953						
0	5.52	33.86	0	5.52	33.86	26.74	0	6.88	33.83	0	6.88	33.83	26.53
25	3.66	33.88	25	3.66	33.88	26.94	25	6.09	33.82	25	6.09	33.82	26.64
49	3.30	34.04	50	3.30	34.04	27.11	50	5.15	33.89	50	5.15	33.89	26.80
74	2.91	34.34	75	2.90	34.34	27.39	76	4.35	33.89	75	4.40	33.89	26.88
99	2.83	34.44	100	2.85	34.44	27.47	101	3.41	34.00	100	3.45	34.00	27.07
148	3.67	34.71	150	3.70	34.72	27.62	152	3.42	34.32	150	3.45	34.30	27.30
197	3.94	34.81	200	3.95	34.81	27.66	202	3.68	34.53	200	3.70	34.52	27.46
296	3.56	34.83	300	3.55	34.83	27.71							
376	3.30	34.81	400	3.35	34.81	27.72							
563	3.37	34.85	600	3.40	34.85	27.75							
749	3.42	34.86	800	3.40	34.87	27.77							
944	3.39	34.88	1,000	3.40	34.88	27.77							
1,447	3.30	34.88											
Station 5553; June 10; latitude 46°28' N., longitude 44°52' W.; depth 805 m.; dynamic height 970.909							Station 5558; June 10; latitude 46°46.5' N., longitude 45°43' W.; depth 278 m.; dynamic height 970.949						
0	5.91	33.79	0	5.91	33.79	26.63	0	6.54	33.81	0	6.54	33.81	26.57
24	3.73	33.76	25	3.75	33.76	26.84	25	5.35	33.84	25	5.35	33.84	26.74
49	4.02	33.94	50	4.00	33.95	26.97	50	4.86	33.87	50	4.86	33.87	26.82
73	3.20	34.08	75	3.25	34.10	27.16	75	4.28	33.90	75	4.28	33.90	26.90
97	4.54	34.51	100	4.50	34.52	27.37	100	3.71	33.96	100	3.71	33.96	27.01
146	3.95	34.64	150	3.95	34.65	27.53	150	3.48	34.30	150	3.48	34.30	27.30
195	4.11	34.76	200	4.10	34.77	27.62	200	3.82	34.60	200	3.82	34.60	27.50
292	3.97	34.83	300	3.95	34.83	27.67							
366	3.76	34.87	400	3.75	34.87	27.73							
559	3.52	34.87	(600)	3.45	34.87	27.76							
Station 5554; June 10; latitude 46°35' N., longitude 44°54' W.; depth 235 m.; dynamic height 970.935							Station 5559; June 10–11; latitude 46°46' N., longitude 46°00' W.; depth 326 m.; dynamic height 970.932						
0	6.05	33.73	0	6.05	33.73	26.56	0	6.34	33.79	0	6.34	33.79	26.57
27	4.69	33.79	25	4.80	33.78	26.75	25	5.09	33.87	25	5.09	33.87	26.80
53	3.72	33.86	50	3.80	33.85	26.91	50	4.82	33.87	50	4.82	33.87	26.83
80	4.07	34.07	75	3.90	34.02	27.04	74	4.47	33.91	75	4.45	33.91	26.89
106	5.19	34.49	100	5.00	34.38	27.20	99	3.67	34.11	100	3.65	34.12	27.15
160	4.23	34.57	150	4.35	34.55	27.41	149	3.48	34.46	150	3.50	34.46	27.43
213	4.11	34.70	200	4.15	34.67	27.53	173	3.80	34.59	200	3.95	34.69	27.56
							198	3.92	34.69	300	3.70	34.83	27.70
							297	3.72	34.83				
Station 5555; June 10; latitude 46°43' N., longitude 44°57' W.; depth 180 m.; dynamic height 970.942							Station 5560; June 11; latitude 46°45.5' N., longitude 46°24' W.; depth 629 m.; dynamic height 970.901						
0	6.36	33.77	0	6.36	33.77	26.56	0	4.71	33.46	0	4.71	33.46	26.51
25	5.70	33.79	25	5.70	33.79	26.66	23	2.60	33.58	25	2.50	33.58	26.81
50	4.78	33.84	50	4.78	33.84	26.80	46	1.92	33.59	50	1.85	33.63	26.91
75	3.98	34.00	75	3.98	34.00	27.01	70	1.79	33.99	75	2.00	34.09	27.26
100	3.83	34.25	100	3.83	34.25	27.23	93	2.64	34.37	100	2.65	34.40	27.46
150	3.89	34.45	150	3.89	34.45	27.38	139	2.27	34.46	150	2.40	34.49	27.55
							185	3.07	34.63	200	3.30	34.67	27.62
							278	3.76	34.82	300	3.75	34.83	27.69
							345	3.64	34.85	400	3.60	34.86	27.74
							540	3.52	34.88	(600)	3.50	34.89	27.77

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5561; June 11; latitude 46°44.5' N., longitude 46°51' W.; depth 1,188 m.; dynamic height 970.887								Station 5566; June 11; latitude 46°48' N., longitude 48°43' W.; depth 82 m.; dynamic height 971.043							
0	4.74	33.55		0	4.74	33.55	26.58	0	4.84	32.54		0	4.84	32.54	25.77
27	3.14	33.89		25	3.20	33.87	26.99	24	2.37	32.74		25	2.35	32.74	26.16
53	2.19	33.94		50	2.25	33.94	27.12	48	1.20	32.78		50	1.05	32.80	26.31
80	1.23	34.22		75	1.35	34.16	27.37	69	-0.98	33.05		75	-1.00	33.12	26.65
106	1.71	34.34		100	1.60	34.32	27.48								
160	2.24	34.55		150	2.15	34.51	27.59								
214	2.66	34.65		200	2.60	34.63	27.64								
320	3.18	34.78		300	3.10	34.76	27.71								
379	3.45	34.81		400	3.50	34.82	27.72								
581	3.53	34.87		600	3.50	34.87	27.76								
793	3.47	34.88		800	3.45	34.88	27.76								
1,012	3.37	34.87		1,000	3.40	34.87	27.77								
Station 5562; June 11; latitude 46°44.5' N., longitude 47°07' W.; depth 622 m.; dynamic height 970.934								Station 5567; June 22; latitude 50°00' N., longitude 49°00' W.; depth 1,833 m.; dynamic height 970.846							
0	2.87	32.97		0	2.87	32.97	26.30	0	7.62	34.48		0	7.62	34.48	26.94
25	-0.16	33.35		25	-0.16	33.35	26.80	27	5.81	34.55		25	5.90	34.54	27.22
51	-0.43	33.69		50	-0.45	33.68	27.08	53	4.57	34.63		50	4.70	34.62	27.43
76	0.61	33.95		75	0.60	33.94	27.23	80	4.06	34.65		75	4.10	34.65	27.52
103	0.91	34.06		100	0.90	34.04	27.30	106	3.99	34.70		100	4.00	34.69	27.56
153	1.93	34.38		150	1.90	34.36	27.49	160	3.50	34.73		150	3.60	34.72	27.63
204	1.97	34.48		200	2.00	34.47	27.57	214	3.51	34.80		200	3.55	34.78	27.67
307	2.42	34.61		300	2.40	34.60	27.64	320	3.45	34.85		200	3.50	34.85	27.74
410	2.76	34.70		400	2.75	34.69	27.68	425	3.20	34.84		400	3.30	34.84	27.75
615	3.08	34.77		600	3.05	34.77	27.72	634	3.21	34.86		600	3.20	34.85	27.77
								842	3.12	34.85		800	3.15	34.85	27.77
								1,057	3.09	34.85		1,000	3.10	34.85	27.78
								1,601	3.26	34.88					
Station 5563; June 11; latitude 46°44.5' N., longitude 47°14' W.; depth 324 m.; dynamic height 970.957								Station 5568; June 22; latitude 49°46.5' N., longitude 49°33' W.; depth 1,412 m.; dynamic height 970.834							
0	2.72	32.95		0	2.72	32.95	26.30	0	6.30	33.89		0	6.30	33.89	26.66
24	-0.51	33.14		25	-0.60	33.14	26.65	27	6.14	34.51		25	6.15	34.46	27.13
47	-1.49	33.27		50	-1.45	33.29	26.79	53	3.99	34.59		50	4.35	34.58	27.43
71	-0.78	33.46		75	-0.70	33.51	26.96	80	3.17	34.67		75	3.30	34.66	27.61
94	-0.92	33.69		100	-0.15	33.74	27.12	106	3.06	34.72		100	3.10	34.71	27.67
141	0.94	34.06		150	1.10	34.14	27.37	160	2.85	34.76		150	2.90	34.76	27.73
189	1.60	34.38		200	1.70	34.41	27.54	213	2.84	34.78		200	2.85	34.78	27.74
283	2.33	34.58		300	2.45	34.60	27.63	319	2.86	34.78		300	2.85	34.78	27.74
								386	2.88	34.80		400	2.95	34.80	27.75
								582	3.13	34.84		600	3.15	34.84	27.76
								780	3.12	34.85		800	3.10	34.85	27.78
								991	3.13	34.86		1,000	3.15	34.86	27.78
								1,334	3.23	34.87					
Station 5564; June 11; latitude 46°44.5' N., longitude 47°34' W.; depth 172 m.; dynamic height 971.009								Station 5569; June 23; latitude 49°36' N., longitude 50°01' W.; depth 642 m.; dynamic height 970.869							
0	2.80	32.72		0	2.80	32.72	26.11	0	4.83	33.25		0	4.83	33.25	26.32
24	-0.04	32.96		25	-0.10	32.97	26.49	25	-0.20	33.87		25	-0.20	33.87	27.23
49	-1.55	33.16		50	-1.55	33.17	26.71	50	1.13	34.15		50	1.13	34.15	27.37
73	-1.59	33.23		75	-1.60	33.24	26.76	75	1.63	34.31		75	1.63	34.31	27.47
97	-1.46	33.32		100	-1.40	33.35	26.84	101	1.85	34.41		100	1.85	34.41	27.53
146	-0.14	33.75		150	0.00	33.79	27.15	151	2.84	34.61		150	2.85	34.61	27.61
								201	3.14	34.69		200	3.15	34.69	27.64
								302	3.17	34.73		300	3.20	34.73	27.67
								394	3.00	34.77		400	3.05	34.77	27.72
								595	3.05	34.82		600	3.05	34.82	27.76
Station 5565; June 11; latitude 46°46' N., longitude 48°10' W.; depth 112 m.; dynamic height 971.040								Station 5570; June 23; latitude 49°27' N., longitude 50°28' W.; depth 326 m.; dynamic height 970.946							
0	3.57	32.61		0	3.57	32.61	25.96	0	5.18	32.86		0	5.18	32.86	25.98
25	2.09	32.75		25	2.09	32.75	26.18	24	-0.48	33.04		25	-0.50	33.05	26.58
49	0.23	32.82		50	0.20	32.82	26.36	48	-1.22	33.35		50	-1.25	33.36	26.85
74	-0.89	33.02		75	-0.85	33.03	26.57	72	-1.26	33.50		75	-1.25	33.52	26.99
98	-0.71	33.26		100	-0.65	33.29	26.77	96	0.29	33.78		100	0.45	33.82	27.15
								144	1.12	34.09		150	1.20	34.12	27.35
								193	1.62	34.33		200	1.70	34.36	27.50
								289	2.48	34.63		(300)	2.60	34.66	27.67

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5571; June 23; latitude 49°19.5' N., longitude 51°00' W.; depth 333 m.; dynamic height 970.918								Station 5576; June 23; latitude 48°47' N., longitude 52°41' W.; depth 220 m.; dynamic height 971.081							
0	5.37	32.93		0	5.37	32.93	26.02	0	5.85	31.45		0	5.85	31.45	24.79
20	3.57	32.99		25	2.85	33.13	26.43	25	-0.10	32.46		25	-0.10	32.46	26.08
41	0.52	33.59		50	0.35	33.79	27.13	50	-1.36	32.94		50	-1.36	32.94	26.52
61	0.32	33.92		75	0.60	33.99	27.27	75	-1.54	33.09		75	-1.54	33.09	26.64
81	0.67	34.02		100	0.85	34.08	27.33	100	-1.57	33.18		100	-1.57	33.18	26.71
122	1.09	34.15		150	1.45	34.27	27.45	151	-1.49	33.29		150	-1.50	33.28	26.79
162	1.59	34.32		200	1.95	34.45	27.56	201	-0.62	33.65		200	-0.60	33.64	27.05
243	2.35	34.58		(300)	2.85	34.72	27.70								
Station 5572; June 23; latitude 49°10.5' N., longitude 51°34' W.; depth 313 m.; dynamic height 970.983								Station 5577; June 23; latitude 48°45' N., longitude 52°46' W.; depth 165 m.; dynamic height 971.090							
0	5.63	32.31		0	5.63	32.31	25.50	0	4.94	31.39		0	4.94	31.39	24.85
25	1.66	32.99		25	1.66	32.99	26.41	24	-0.69	32.50		25	-0.75	32.51	26.15
49	-0.96	33.14		50	-1.00	33.15	26.68	49	-1.25	32.81		50	-1.30	32.82	26.42
74	-1.54	33.32		75	-1.55	33.33	26.84	73	-1.51	32.99		75	-1.50	32.99	26.56
98	-0.89	33.53		100	-0.85	33.55	26.99	97	-1.50	33.04		100	-1.50	33.04	26.60
147	0.08	33.90		150	0.15	33.92	27.25	136	-1.57	33.10		(150)	-1.55	33.16	26.70
196	1.24	34.17		200	1.30	34.19	27.39								
294	2.34	34.58		300	2.40	34.60	27.64								
Station 5573; June 23; latitude 49°04' N., longitude 51°52' W.; depth 297 m.; dynamic height 970.996								Station 5578; June 23; latitude 48°42' N., longitude 52°54' W.; depth 104 m.; dynamic height 971.092							
0	4.94	32.12		0	4.94	32.12	25.43	0	4.82	31.43		0	4.82	31.43	24.89
23	0.79	32.95		25	0.65	32.96	26.45	25	0.50	32.17		25	0.50	32.17	25.82
47	-0.93	33.10		50	-1.00	33.11	26.64	49	-1.27	32.82		50	-1.30	32.83	26.42
70	-1.44	33.24		75	-1.50	33.26	26.78	74	-1.39	33.00		75	-1.35	33.01	26.58
94	-1.59	33.35		100	-1.55	33.38	26.88					(100)	-1.50	33.08	26.63
141	-0.08	33.76		150	0.20	33.83	27.17								
188	1.11	34.06		200	1.30	34.12	27.34								
277	2.16	34.50													
Station 5574; June 23; latitude 48°58' N., longitude 52°06' W.; depth 297 m.; dynamic height 971.007								Station 5579; June 23; latitude 48°37' N., longitude 52°43' W.; depth 247 m.; dynamic height 971.085							
0	4.99	31.99		0	4.99	31.99	25.32	0	5.77	31.34		0	5.77	31.34	24.71
25	-0.31	32.95		25	-0.31	32.95	26.48	24	0.20	32.40		25	0.15	32.45	26.06
50	-1.35	33.12		50	-1.35	33.12	26.66	47	-1.35	32.83		50	-1.35	32.84	26.43
74	-1.72	33.21		75	-1.70	33.21	26.75	71	-1.39	32.89		75	-1.40	32.91	26.49
99	-1.63	33.31		100	-1.60	33.31	26.82	94	-1.50	33.04		100	-1.50	33.05	26.60
149	-0.57	33.67		150	-0.55	33.68	27.08	141	-1.57	33.12		(150)	-1.55	33.15	26.69
199	0.92	34.07		200	0.95	34.08	27.32								
283	2.11	34.46													
Station 5575; June 23; latitude 48°51' N., longitude 52°22' W.; depth 353 m.; dynamic height 971.048								Station 5580; June 24; latitude 48°34.5' N., longitude 52°37' W.; depth 261 m.; dynamic height 971.052							
0	5.66	31.81		0	5.66	31.81	25.10	0	5.59	31.32		0	5.59	31.32	24.72
25	-1.44	33.01		25	-1.44	33.01	26.58	26	1.44	32.55		25	1.50	32.51	26.04
50	-1.62	33.10		50	-1.62	33.10	26.65	51	-0.81	32.92		50	-0.75	32.91	26.47
75	-1.73	33.18		75	-1.73	33.18	26.72	77	-1.55	33.10		75	-1.55	33.08	26.63
100	-1.71	33.23		100	-1.71	33.23	26.76	103	-1.61	33.23		100	-1.60	33.21	26.74
150	-1.62	33.31		150	-1.62	33.31	26.82	153	-1.28	33.41		150	-1.30	33.40	26.89
201	-0.74	33.66		200	-0.75	33.65	27.07	205	-0.98	33.50		200	-1.00	33.49	26.95
301	1.66	34.31		300	1.65	34.30	27.46	247	-0.10	33.84					
Station 5581; June 24; latitude 48°22.5' N., longitude 52°06' W.; depth 190 m.; dynamic height 971.039								Station 5581; June 24; latitude 48°22.5' N., longitude 52°06' W.; depth 190 m.; dynamic height 971.039							
0	4.38	32.14		0	4.38	32.14	25.50	0	4.38	32.14		0	4.38	32.14	25.50
25	0.88	32.51		25	0.88	32.51	26.07	25	0.88	32.51		25	0.88	32.51	26.07
49	-1.16	32.99		50	-1.20	33.00	26.56	49	-1.16	32.99		50	-1.20	33.00	26.56
74	-1.33	33.09		75	-1.30	33.10	26.64	74	-1.33	33.09		75	-1.30	33.10	26.64
98	-1.07	33.21		100	-1.05	33.22	26.73	98	-1.07	33.21		100	-1.05	33.22	26.73
147	-1.11	33.36		150	-1.10	33.37	26.85	147	-1.11	33.36		150	-1.10	33.37	26.85

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5582; June 24; latitude 48°17.5' N., longitude 51°54' W.; depth 185 m.; dynamic height 971.042															
0	4.54	32.18		0	4.54	32.18	25.51	0	5.95	32.64		0	5.95	32.64	25.73
25	0.59	32.53		25	0.59	32.53	26.11	25	3.56	32.67		25	3.56	32.67	26.00
51	-0.93	32.88		50	-0.85	32.88	26.45	50	0.19	32.86		50	0.19	32.86	26.39
76	-1.44	33.06		75	-1.40	33.05	26.60	64	-0.65	33.17	(75)	-0.75	33.40	26.87	
103	-1.61	33.23		100	-1.60	33.22	26.75								
153	-1.51	33.32		150	-1.50	33.31	26.82								
178	-1.02	33.49													
Station 5583; June 24; latitude 48°10' N., longitude 51°37' W.; depth 236 m.; dynamic height 971.053															
0	4.71	32.08		0	4.71	32.08	25.42	0	5.16	32.47		0	5.16	32.47	25.68
25	-0.50	32.69		25	-0.50	32.69	26.28	25	2.39	32.56		25	2.39	32.56	26.01
50	-1.06	32.90		50	-1.06	32.90	26.47	50	-1.25	33.10		50	-1.25	33.10	26.64
75	-1.23	33.02		75	-1.23	33.02	26.58	76	-1.04	33.28		75	-1.05	33.27	26.77
100	-1.30	33.05		100	-1.30	33.05	26.60	101	-1.12	33.46		100	-1.10	33.45	26.92
149	-1.33	33.17		150	-1.30	33.17	26.70								
199	-0.66	33.36		200	-0.60	33.36	26.82								
Station 5584; June 24; latitude 48°02' N., longitude 51°18' W.; depth 155 m.; dynamic height 971.030															
0	5.35	32.29		0	5.35	32.29	25.51	0	5.90	32.26		0	5.90	32.26	25.42
25	1.93	32.69		25	1.93	32.69	26.14	25	1.95	32.87		25	1.95	32.87	26.29
50	-0.89	32.87		50	-0.89	32.87	26.45	49	-0.79	33.14		50	-0.80	33.15	26.66
75	-1.17	33.00		75	-1.17	33.00	26.56	74	-1.21	33.30		75	-1.20	33.31	26.81
100	-1.30	33.14		100	-1.30	33.14	26.67	98	-1.15	33.42		100	-1.10	33.43	26.90
148	-0.71	33.48		150	-0.65	33.49	26.94	147	-0.41	33.73		150	-0.35	33.76	27.14
Station 5585; June 24; latitude 47°52.5' N., longitude 50°56' W.; depth 117 m.; dynamic height 971.026															
0	5.49	32.55		0	5.49	32.55	25.70	0	5.67	32.31		0	5.67	32.31	25.49
25	2.40	32.67		25	2.40	32.67	26.10	25	2.29	32.77		25	2.29	32.77	26.19
50	-0.60	32.91		50	-0.60	32.91	26.46	50	-0.45	33.11		50	-0.45	33.11	26.62
76	-1.14	33.08		75	-1.10	33.07	26.61	75	-1.12	33.37		75	-1.12	33.37	26.85
101	-0.84	33.26		100	-0.85	33.25	26.74	100	-1.00	33.58		100	-1.00	33.58	27.02
								149	0.53	33.96		150	0.55	33.97	27.27
								199	1.06	34.12		200	1.10	34.12	27.36
Station 5586; June 24; latitude 47°43' N., longitude 50°36' W.; depth 128 m.; dynamic height 971.018															
0	5.25	32.66		0	5.25	32.66	25.81	0	5.13	32.66		0	5.13	32.66	25.82
25	2.58	32.68		25	2.58	32.68	26.09	22	1.64	33.04		25	1.20	33.73	26.51
50	-0.89	33.01		50	-0.89	33.01	26.36	43	-0.75	33.27		50	-0.70	33.34	26.82
76	-1.13	33.20		75	-1.15	33.20	26.72	65	-0.40	33.57		75	0.10	33.80	27.15
101	-1.16	33.31		100	-1.15	33.31	26.81	87	1.65	34.11		100	1.60	34.19	27.37
								130	1.50	34.30		150	1.70	34.36	27.50
								173	1.92	34.41		200	2.10	34.46	27.55
								260	2.41	34.56		300	2.55	34.61	27.64
								297	2.57	34.61		400	2.85	34.72	27.70
								491	2.98	34.80		(600)	3.10	34.84	27.77
Station 5587; June 24; latitude 47°35.5' N., longitude 50°19' W.; depth 210 m.; dynamic height 971.022															
0	5.49	32.65		0	5.49	32.65	25.78	0	5.35	32.90		0	5.35	32.90	25.99
24	3.09	32.66		25	2.70	32.66	26.06	26	0.18	33.74		25	0.20	33.73	27.09
48	-0.72	32.94		50	-0.70	32.95	26.50	52	0.19	34.00		50	0.20	33.96	27.28
72	-0.70	33.18		75	-0.70	33.20	26.71	78	0.96	34.16		75	0.85	34.14	27.38
97	-0.81	33.31		100	-0.80	33.32	26.80	105	2.12	34.40		100	1.95	34.36	27.49
145	-0.54	33.46		150	-0.50	33.48	26.92	156	2.35	34.58		150	2.35	34.57	27.62
								208	2.51	34.64		200	2.50	34.63	27.65
								313	2.82	34.72		300	2.80	34.71	27.69
								417	3.13	34.78		400	3.10	34.77	27.72
								627	3.39	34.86		600	3.40	34.85	27.75
								837	3.67	34.87		800	3.35	34.87	27.77
								1,048	3.26	34.88		1,000	3.25	34.88	27.78
Station 5592; June 25; latitude 48°30' N., longitude 49°40' W.; depth 659 m.; dynamic height 970.932															
0	5.13	32.66		0	5.13	32.66	25.82	0	5.95	32.64		0	5.95	32.64	25.73
22	1.64	33.04		25	1.20	33.73	26.51	25	3.56	32.67		25	3.56	32.67	26.00
43	-0.75	33.27		50	-0.70	33.34	26.82	50	0.19	32.86		50	0.19	32.86	26.39
65	-0.40	33.57		75	0.10	33.80	27.15	64	-0.65	33.17	(75)	-0.75	33.40	26.87	
87	1.65	34.11		100	1.60	34.19	27.37								
130	1.50	34.30		150	1.70	34.36	27.50								
173	1.92	34.41		200	2.10	34.46	27.55								
260	2.41	34.56		300	2.55	34.61	27.64								
297	2.57	34.61		400	2.85	34.72	27.70								
491	2.98	34.80		(600)	3.10	34.84	27.77								
Station 5593; June 25; latitude 48°40.5' N., longitude 49°25' W.; depth 1,060 m.; dynamic height 970.884															
0	5.35	32.90		0	5.35	32.90	25.99	0	5.95	32.64		0	5.95	32.64	25.73
26	0.18	33.74		25	0.20	33.73	27.09	25	3.56	32.67		25	3.56	32.67	26.00
52	0.19	34.00		50	0.20	33.96	27.28	50	0.19	32.86		50	0.19	32.86	26.39
78	0.96	34.16		75	0.85	34.14	27.38	64	-0.65	33.17	(75)	-0.75	33.40	26.87	
105	2.12	34.40		100	1.95	34.36	27.49								
156	2.35	34.58		150	2.35	34.57	27.62								
208	2.51	34.64		200	2.50	34.63	27.65								
313	2.82	34.72		300	2.80	34.71	27.69								
417	3.13	34.78		400	3.10	34.77	27.72								
627	3.39	34.86		600	3.40	34.85	27.75								
837	3.67	34.87		800	3.35	34.87	27.77								
1,048	3.26	34.88		1,000	3.25	34.88	27.78								

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5594; June 25; latitude 49°05' N., longitude 49°12' W.; depth 1,719 m.; dynamic height 970.823								Station 5598; June 25; latitude 49°41.5' N., longitude 47°42' W.; depth 2,679 m.; dynamic height 970.868							
0	6.71	33.98		0	6.71	33.98	26.67	0	9.03	34.26		0	9.03	34.26	26.55
25	5.34	34.34		25	5.34	34.34	27.13	26	7.05	34.38		25	7.15	34.38	26.93
50	3.65	34.58		50	3.65	34.58	27.50	52	5.16	34.52		50	5.35	34.51	27.27
74	2.97	34.66		75	2.95	34.66	27.64	78	3.69	34.56		75	3.85	34.55	27.46
99	2.73	34.69		100	2.70	34.69	27.68	105	3.06	34.59		100	3.15	34.58	27.55
149	2.62	34.72		150	2.65	34.72	27.72	156	3.36	34.72		150	3.35	34.71	27.64
198	2.70	34.76		200	2.70	34.77	27.75	208	3.40	34.76		200	3.40	34.75	27.67
297	2.94	34.81		300	2.95	34.81	27.76	313	3.48	34.84		300	3.50	34.83	27.72
379	3.08	34.84		400	3.10	34.84	27.77	403	3.52	34.87		400	3.55	34.87	27.75
569	3.15	34.86		600	3.15	34.86	27.78	601	3.42	34.87		600	3.45	34.87	27.76
760	3.15	34.85		800	3.15	34.86	27.78	798	3.35	34.87		800	3.35	34.87	27.77
957	3.14	34.86		1,000	3.15	34.86	27.78	1,002	3.29	34.875		1,000	3.30	34.88	27.78
1,461	3.24	34.88						1,521	3.28	34.885					
Station 5595; June 25; latitude 49°32.5' N., longitude 49°06' W.; depth 1,737 m.; dynamic height 970.813								Station 5599; June 26; latitude 49°16.5' N., longitude 47°58' W.; depth 2,332 m.; dynamic height 970.808							
0	7.36	34.16		0	7.36	34.16	26.73	0	8.76	34.48		0	8.76	34.48	26.77
25	4.73	34.40		25	4.73	34.40	27.25	24	6.63	34.58		25	6.55	34.58	27.17
49	3.44	34.67		50	3.40	34.68	27.61	48	3.74	34.69		50	3.65	34.70	27.60
74	3.04	34.73		75	3.00	34.73	27.69	72	3.36	34.74		75	3.30	34.74	27.67
98	2.94	34.75		100	2.95	34.75	27.71	96	3.16	34.77		100	3.15	34.77	27.71
147	2.87	34.77		150	2.85	34.77	27.74	144	3.01	34.81		150	3.00	34.81	27.76
197	2.78	34.78		200	2.80	34.78	27.74	191	3.00	34.83		200	3.00	34.83	27.77
295	3.19	34.84		300	3.20	34.84	27.76	287	3.02	34.84		300	3.05	34.84	27.77
326	3.10	34.84		400	3.10	34.84	27.77	369	3.03	34.85		400	3.05	34.85	27.78
528	3.08	34.85		600	3.05	34.85	27.78	554	3.12	34.86		600	3.15	34.86	27.78
756	3.09	34.85		800	3.10	34.85	27.78	739	3.09	34.86		800	3.05	34.86	27.79
952	3.10	34.855		1,000	3.10	34.86	27.79	933	3.06	34.86		1,000	3.05	34.86	27.79
1,455	3.24	34.89						1,431	3.16	34.91					
Station 5596; June 25; latitude 50°00' N., longitude 48°59' W.; depth 1,829 m.; dynamic height 970.872								Station 5600; June 26; latitude 48°53.5' N., longitude 48°13' W.; depth 2,195 m.; dynamic height 970.840							
0	8.04	34.50		0	8.04	34.50	26.89	0	8.64	34.43		0	8.64	34.43	26.74
23	7.86	34.50		25	7.55	34.50	26.97	26	5.47	34.48		25	5.55	34.48	27.21
46	5.40	34.58		50	5.20	34.59	27.35	52	3.91	34.58		50	3.95	34.57	27.47
69	4.58	34.64		75	4.50	34.64	27.46	79	3.86	34.66		75	3.85	34.65	27.54
92	4.26	34.65		100	4.20	34.66	27.52	105	3.72	34.72		100	3.75	34.71	27.60
138	4.07	34.69		150	4.05	34.70	27.56	156	3.66	34.79		150	3.70	34.78	27.66
183	3.90	34.74		200	3.85	34.76	27.63	209	3.44	34.82		200	3.50	34.82	27.72
275	3.67	34.82		300	3.70	34.84	27.71	314	3.23	34.82		300	3.25	34.82	27.74
330	3.65	34.85		400	3.45	34.85	27.74	420	3.22	34.84		400	3.25	34.83	27.74
501	3.18	34.84		600	3.05	34.82	27.76	624	3.25	34.87		600	3.30	34.87	27.78
676	3.02	34.82		800	3.10	34.83	27.76	825	3.29	34.88		800	3.30	34.87	27.78
859	3.10	34.84		1,000	3.10	34.85	27.78	1,034	3.20	34.86		1,000	3.20	34.86	27.78
1,343	3.13	34.86						1,563	3.31	34.91					
Station 5597; June 25; latitude 49°51.5' N., longitude 48°19' W.; depth 2,378 m.; dynamic height 970.872								Station 5601; June 26; latitude 48°31' N., longitude 48°26' W.; depth 1,792 m.; dynamic height 970.844							
0	8.29	34.50		0	8.29	34.50	26.85	0	7.26	33.74		0	7.26	33.74	26.42
26	6.09	34.63		25	6.15	34.62	27.26	22	4.84	34.11		25	4.50	34.15	27.08
52	4.02	34.69		50	4.10	34.68	27.54	45	2.43	34.49		50	2.40	34.51	27.57
78	3.57	34.72		75	3.60	34.72	27.63	67	2.37	34.56		75	2.40	34.57	27.62
103	3.38	34.74		100	3.40	34.74	27.66	90	2.40	34.59		100	2.45	34.61	27.64
156	3.05	34.76		150	3.10	34.76	27.71	135	2.75	34.68		150	2.75	34.69	27.68
207	2.92	34.79		200	2.95	34.78	27.73	179	2.69	34.71		200	2.75	34.72	27.71
310	2.91	34.81		300	2.90	34.81	27.77	269	2.92	34.77		300	3.05	34.79	27.73
406	2.99	34.84		400	3.00	34.84	27.78	363	3.32	34.84		400	3.30	34.84	27.75
607	3.04	34.845		600	3.05	34.84	27.78	553	3.18	34.84		600	3.20	34.84	27.76
810	3.08	34.85		800	3.10	34.85	27.78	749	3.25	34.86		800	3.25	34.86	27.77
1,018	3.12	34.875		1,000	3.10	34.87	27.80	950	3.18	34.86		1,000	3.20	34.86	27.78
1,549	3.10	34.92						1,476	3.24	34.89					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5602; June 26; latitude 48°11' N., longitude 48°36' W.; depth 677 m.; dynamic height 970.915								Station 5607; June 26; latitude 47°47' N., longitude 48°08' W.; depth 276 m.; dynamic height 971.001							
0	5.48	32.70		0	5.48	32.70	25.82	0	6.92	32.18		0	6.92	32.18	25.23
25	1.88	33.18		25	1.88	33.18	26.55	24	1.37	32.97		25	1.40	32.98	26.42
50	0.46	33.74		50	0.46	33.74	27.08	48	-1.02	33.22		50	-1.05	33.24	26.75
74	0.25	33.96		75	0.25	33.96	27.28	72	-1.07	33.38		75	-1.05	33.40	26.88
99	1.76	34.31		100	1.80	34.32	27.47	96	-0.60	33.62		100	-0.50	33.67	27.08
148	2.58	34.58		150	2.60	34.59	27.61	143	0.60	33.98		150	0.75	34.02	27.30
198	3.07	34.71		200	3.10	34.71	27.67	191	1.33	34.21		200	1.45	34.24	27.42
297	2.88	34.74		300	2.90	34.74	27.71	240	1.80	34.37					
341	2.87	34.74		400	2.85	34.74	27.71								
528	2.85	34.75		(600)	2.85	34.75	27.72								
Station 5603; June 26; latitude 48°05.5' N., longitude 48°38' W.; depth 324 m.; dynamic height 970.968								Station 5608; June 27; latitude 47°50' N., longitude 47°49' W.; depth 309 m.; dynamic height 970.980							
0	6.20	32.64		0	6.20	32.64	25.69	0	6.54	32.46		0	6.54	32.46	25.50
26	0.48	33.14		25	0.90	33.13	26.57	27	1.89	33.16		25	2.30	33.12	26.47
52	-1.02	33.46		50	-1.00	33.42	26.90	52	-1.13	33.31		50	-1.05	33.30	26.79
78	-0.59	33.72		75	-0.65	33.68	27.09	78	-0.89	33.57		75	-0.95	33.53	26.98
104	0.31	33.93		100	0.15	33.90	27.23	103	-0.08	33.84		100	-0.15	33.81	27.18
157	1.27	34.23		150	1.15	34.19	27.40	156	1.24	34.17		150	1.15	34.14	27.36
209	2.11	34.47		200	2.05	34.44	27.54	208	1.77	34.40		200	1.70	34.37	27.51
313	2.24	34.52		300	2.25	34.51	27.58	278	2.10	34.46		(300)	2.20	34.48	27.56
Station 5604; June 26; latitude 47°51' N., longitude 48°44' W.; depth 224 m.; dynamic height 971.018								Station 5609; June 27; latitude 47°59' N., longitude 47°40' W.; depth 368 m.; dynamic height 970.945							
0	6.74	32.22		0	6.74	32.22	25.29	0	6.20	32.68		0	6.20	32.68	25.72
26	-0.16	32.98		25	0.10	32.97	26.49	25	0.71	33.20		25	0.71	33.20	26.64
53	-1.00	33.15		50	-0.95	33.13	26.66	51	-0.91	33.56		50	-0.90	33.54	26.99
79	-1.54	33.33		75	-1.50	33.30	26.81	76	-0.24	33.82		75	-0.25	33.81	27.18
105	-0.75	33.59		100	-0.95	33.54	26.99	102	0.34	33.99		100	0.30	33.98	27.28
157	0.15	33.90		150	0.05	33.87	27.22	151	1.32	34.27		150	1.30	34.26	27.45
210	1.10	34.15		200	0.90	34.10	27.35	202	2.22	34.51		200	2.20	34.50	27.58
								304	2.72	34.66		300	2.70	34.65	27.65
Station 5605; June 26; latitude 47°40.5' N., longitude 48°49' W.; depth 172 m.; dynamic height 971.033								Station 5610; June 27; latitude 48°17' N., longitude 47°22' W.; depth 1,654 m.; dynamic height 970.840							
0	5.87	32.62		0	5.87	32.62	25.72	0	6.29	33.47		0	6.29	33.47	26.33
25	-0.08	32.88		25	-0.08	32.88	26.42	26	1.79	34.32		25	1.80	34.28	27.43
51	-1.52	33.12		50	-1.50	33.11	26.65	52	1.90	34.42		50	1.90	34.41	27.33
76	-1.59	33.21		75	-1.60	33.21	26.75	78	2.07	34.49		75	2.05	34.48	27.57
101	-1.47	33.28		100	-1.45	33.28	26.79	104	2.28	34.56		100	2.25	34.55	27.61
152	-0.66	33.63		150	-0.70	33.61	27.04	155	2.55	34.65		150	2.55	34.64	27.66
								208	2.81	34.71		200	2.75	34.70	27.69
								312	3.24	34.79		300	3.20	34.78	27.71
								399	3.19	34.82		400	3.20	34.82	27.75
								596	3.30	34.86		600	3.30	34.86	27.77
								789	3.28	34.87		800	3.30	34.87	27.78
								992	3.20	34.87		1,000	3.20	34.87	27.79
								1,509	3.29	34.89					
Station 5606; June 26; latitude 47°44' N., longitude 48°26' W.; depth 226 m.; dynamic height 971.014															
0	6.48	32.39		0	6.48	32.39	25.46								
24	0.29	32.98		25	0.25	32.99	26.50								
49	-0.50	33.17		50	-0.55	33.17	26.67								
73	-1.50	33.29		75	-1.45	33.30	26.80								
98	-0.83	33.51		100	-0.80	33.54	26.98								
146	0.05	33.86		150	0.15	33.88	27.21								
195	1.10	34.09		200	1.20	34.11	27.34								

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5611; June 27; latitude 48°36.5' N., longitude 47°02' W.; depth 2,834 m.; dynamic height 970.839							Station 5615; June 28; latitude 49°00.5' N., longitude 44°58' W.; depth 1,646 m.; dynamic height 970.836						
0	7.79	33.91	0	7.79	33.91	26.47	0	8.61	34.18	0	8.61	34.18	26.56
25	2.02	34.19	25	2.02	34.19	27.34	28	4.51	34.42	25	4.75	34.41	27.26
49	1.93	34.40	50	1.95	34.40	27.52	54	3.33	34.55	50	3.45	34.53	27.48
74	2.09	34.48	75	2.10	34.48	27.56	82	2.77	34.63	75	2.90	34.61	27.61
98	2.33	34.58	100	2.40	34.59	27.63	109	2.68	34.69	100	2.70	34.67	27.67
147	2.68	34.68	150	2.80	34.68	27.66	164	2.89	34.74	150	2.80	34.72	27.70
197	2.91	34.74	200	2.95	34.74	27.70	218	3.15	34.80	200	3.10	34.78	27.72
295	3.20	34.81	300	3.20	34.81	27.74	327	3.31	34.85	300	3.30	34.84	27.75
359	3.30	34.83	400	3.30	34.84	27.75	390	3.28	34.85	400	3.30	34.85	27.76
540	3.28	34.86	600	3.30	34.86	27.77	584	3.23	34.85	600	3.25	34.85	27.76
721	3.26	34.86	800	3.25	34.86	27.77	776	3.21	34.85	800	3.25	34.85	27.76
910	3.22	34.87	1,000	3.20	34.87	27.79	979	3.19	34.87	1,000	3.20	34.87	27.79
1,401	3.23	34.89					1,506	3.28	34.90				
Station 5612; June 27; latitude 48°58.5' N., longitude 46°41' W.; depth 2,726 m.; dynamic height 970.838							Station 5616; June 28; latitude 48°39' N., longitude 45°22' W.; depth 1,042 m.; dynamic height 970.869						
0	9.61	34.29	0	9.61	34.29	26.48	0	8.15	33.95	0	8.15	33.95	26.45
25	5.55	34.42	25	5.55	34.42	27.17	26	5.55	34.06	25	5.60	34.06	26.88
50	4.06	34.52	50	4.06	34.52	27.42	52	3.54	34.30	50	3.70	34.29	27.27
75	3.15	34.58	75	3.15	34.58	27.55	78	2.96	34.39	75	3.00	34.37	27.41
99	2.73	34.65	100	2.75	34.65	27.65	105	2.93	34.63	100	2.95	34.51	27.52
149	2.79	34.72	150	2.80	34.72	27.70	156	2.63	34.65	150	2.65	34.64	27.65
199	3.05	34.78	200	3.05	34.78	27.72	208	3.07	34.76	200	3.00	34.75	27.71
298	3.09	34.82	300	3.10	34.82	27.76	313	3.30	34.82	300	3.30	34.81	27.73
391	3.22	34.85	400	3.25	34.85	27.76	409	3.40	34.85	400	3.40	34.85	27.75
584	3.35	34.88	600	3.35	34.88	27.77	610	3.47	34.88	600	3.50	34.88	27.76
774	3.25	34.865	800	3.25	34.87	27.78	808	3.38	34.88	800	3.40	34.88	27.77
973	3.27	34.87	1,000	3.25	34.87	27.78	994	3.29	34.875	1,000	3.30	34.88	27.78
1,479	3.30	34.90											
Station 5613; June 27; latitude 49°18.5' N., longitude 46°22' W.; depth 2,963 m.; dynamic height 970.914							Station 5617; June 28; latitude 48°16' N., longitude 45°53' W.; depth 1,097 m.; dynamic height 970.867						
0	9.89	34.16	0	9.89	34.16	26.33	0	8.17	33.84	0	8.17	33.84	26.36
24	8.01	34.23	25	7.90	34.23	26.70	25	2.43	33.82	25	2.43	33.82	27.01
49	5.16	34.38	50	5.15	34.39	27.19	50	2.85	34.29	50	2.85	34.29	27.35
73	4.84	34.46	75	4.80	34.47	27.30	75	2.39	34.39	75	2.39	34.39	27.47
98	4.63	34.53	100	4.60	34.53	27.36	100	2.76	34.53	100	2.76	34.53	27.55
147	4.12	34.64	150	4.15	34.64	27.50	150	3.26	34.69	150	3.26	34.69	27.63
195	4.95	34.85	200	4.90	34.85	27.59	200	3.32	34.75	200	3.32	34.75	27.68
293	3.64	34.80	300	3.65	34.80	27.68	300	3.43	34.82	300	3.43	34.82	27.72
360	3.92	34.87	400	3.80	34.86	27.72	409	3.60	34.87	400	3.60	34.87	27.75
542	3.29	34.83	600	3.30	34.84	27.75	610	3.51	34.89	600	3.55	34.89	27.76
726	3.42	34.87	800	3.40	34.87	27.77	809	3.34	34.88	800	3.40	34.88	27.77
916	3.36	34.87	1,000	3.35	34.87	27.77	1,028	3.26	34.88	1,000	3.25	34.88	27.78
1,405	3.30	34.87											
Station 5614; June 27; latitude 49°11.5' N., longitude 45°39' W.; depth 2,743 m.; dynamic height 970.857							Station 5618; June 28; latitude 47°57' N., longitude 46°18' W.; depth 1,143 m.; dynamic height 970.864						
0	9.12	34.24	0	9.12	34.24	26.53	0	7.97	33.55	0	7.97	33.55	26.17
24	5.68	34.37	25	5.60	34.37	27.13	25	2.62	34.05	25	2.62	34.05	27.18
49	4.55	34.47	50	4.50	34.47	27.34	50	2.82	34.36	50	2.82	34.36	27.41
73	3.22	34.44	75	3.20	34.44	27.44	76	2.69	34.48	75	2.70	34.48	27.51
97	3.03	34.56	100	3.00	34.57	27.57	101	3.06	34.62	100	3.05	34.62	27.60
145	2.77	34.64	150	2.80	34.65	27.64	151	2.90	34.69	150	2.90	34.69	27.67
194	2.77	34.71	200	2.80	34.72	27.70	202	3.22	34.77	200	3.20	34.77	27.71
291	3.34	34.83	300	3.35	34.83	27.73	303	3.35	34.83	300	3.35	34.83	27.73
330	3.41	34.84	400	3.40	34.85	27.75	394	3.44	34.85	400	3.45	34.85	27.74
503	3.38	34.86	600	3.40	34.87	27.77	589	3.48	34.85	600	3.50	34.85	27.74
681	3.38	34.87	800	3.35	34.87	27.77	781	3.41	34.88	800	3.45	34.88	27.76
860	3.32	34.87	1,000	3.30	34.87	27.78	998	3.33	34.88	1,000	3.30	34.88	27.78
1,320	3.20	34.86											

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values			σ_t	Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	
Station 5619; June 28; latitude 47°53.5' N., longitude 46°04' W.; depth 860 m.; dynamic height 970.862													
0	8.11	33.48	0	8.11	33.48	26.08	0	10.70	33.66	0	10.70	33.66	25.81
25	3.85	34.07	25	3.85	34.07	27.09	25	6.18	33.82	25	6.18	33.82	26.62
50	2.53	34.32	50	2.53	34.32	27.41	50	5.08	33.87	50	5.08	33.87	26.80
76	2.15	34.41	75	2.15	34.41	27.51	75	4.28	33.96	75	4.28	33.96	26.95
101	2.80	34.57	100	2.80	34.57	27.58	100	3.96	34.13	100	3.96	34.13	27.12
151	2.72	34.63	150	2.70	34.63	27.63	151	4.06	34.46	150	4.05	34.46	27.37
202	3.25	34.76	200	3.25	34.75	27.68	201	4.06	34.64	200	4.05	34.63	27.50
303	3.35	34.80	300	3.35	34.80	27.71							
427	3.50	34.86	400	3.50	34.85	27.74							
634	3.46	34.89	600	3.45	34.89	27.77							
839	3.34	34.89	800	3.30	34.89	27.79							
Station 5624; June 28; latitude 47°30.5' N., longitude 45°01' W.; depth 222 m.; dynamic height 970.951													
0	10.70	33.66	0	10.70	33.66	25.81	0	10.61	33.70	0	10.61	33.70	25.86
25	6.18	33.82	25	6.18	33.82	26.62	25	6.34	33.81	25	6.34	33.81	26.59
50	5.08	33.87	50	5.08	33.87	26.80	49	5.35	33.86	50	5.30	33.86	26.76
75	4.28	33.96	75	4.28	33.96	26.95	74	4.64	33.93	75	4.60	33.93	26.89
100	3.96	34.13	100	3.96	34.13	27.12	98	3.97	34.00	100	3.95	34.01	27.03
151	4.06	34.46	150	4.05	34.46	27.37	147	3.95	34.34	150	3.95	34.37	27.31
201	4.06	34.64	200	4.05	34.63	27.50	196	4.46	34.66	200	4.45	34.69	27.51
Station 5625; June 29; latitude 47°48.5' N., longitude 45°02' W.; depth 254 m.; dynamic height 970.959													
0	10.61	33.70	0	10.61	33.70	25.86	0	9.09	33.51	0	9.09	33.51	25.97
25	6.34	33.81	25	6.34	33.81	26.59	25	5.45	33.74	25	5.45	33.74	26.65
49	5.35	33.86	50	5.30	33.86	26.76	50	4.31	33.93	50	4.31	33.93	26.92
74	4.64	33.93	75	4.60	33.93	26.89	75	3.60	34.12	75	3.60	34.12	27.15
98	3.97	34.00	100	3.95	34.01	27.03	100	3.33	34.31	100	3.33	34.31	27.32
147	3.95	34.34	150	3.95	34.37	27.31	150	4.00	34.62	150	4.00	34.62	27.61
196	4.46	34.66	200	4.45	34.69	27.51	201	3.32	34.64	200	3.35	34.64	27.58
							301	3.77	34.85	300	3.75	34.85	27.71
Station 5626; June 29; latitude 48°05' N., longitude 45°02' W.; depth 351 m.; dynamic height 970.918													
0	9.09	33.51	0	9.09	33.51	25.97	0	9.16	33.59	0	9.16	33.59	26.01
25	5.45	33.74	25	5.45	33.74	26.65	25	5.53	34.01	25	5.53	34.01	26.85
50	4.31	33.93	50	4.31	33.93	26.92	50	3.17	34.12	50	3.17	34.12	27.19
75	3.60	34.12	75	3.60	34.12	27.15	76	2.69	34.30	75	2.70	34.30	27.37
100	3.33	34.31	100	3.33	34.31	27.32	101	2.73	34.42	100	2.70	34.42	27.47
150	4.00	34.62	150	4.00	34.62	27.61	151	3.15	34.60	150	3.15	34.60	27.57
201	3.32	34.64	200	3.35	34.64	27.58	202	3.34	34.69	200	3.35	34.68	27.61
301	3.77	34.85	300	3.75	34.85	27.71	303	3.73	34.86	300	3.75	34.85	27.71
							402	3.60	34.87	400	3.60	34.87	27.75
							603	3.44	34.89	600	3.45	34.89	27.77
Station 5627; June 29; latitude 48°25' N., longitude 45°02' W.; depth 642 m.; dynamic height 970.886													
0	9.16	33.59	0	9.16	33.59	26.01	0	8.45	33.70	0	8.45	33.70	26.21
25	5.53	34.01	25	5.53	34.01	26.85	25	5.58	34.05	25	5.58	34.05	26.87
50	3.17	34.12	50	3.17	34.12	27.19	51	3.81	34.30	50	3.90	34.30	27.26
76	2.69	34.30	75	2.70	34.30	27.37	76	2.75	34.40	75	2.75	34.40	27.45
101	2.73	34.42	100	2.70	34.42	27.47	102	2.80	34.51	100	2.80	34.50	27.52
151	3.15	34.60	150	3.15	34.60	27.57	152	3.09	34.67	150	3.10	34.66	27.63
202	3.34	34.69	200	3.35	34.68	27.61	203	3.63	34.78	200	3.60	34.77	27.67
303	3.73	34.86	300	3.75	34.85	27.71	305	3.70	34.87	300	3.70	34.87	27.74
402	3.60	34.87	400	3.60	34.87	27.75	404	3.58	34.88	400	3.60	34.88	27.75
603	3.44	34.89	600	3.45	34.89	27.77	597	3.34	34.88	600	3.35	34.88	27.77
							758	3.25	34.875	(800)	3.20	34.87	27.79
Station 5628; June 29; latitude 48°34' N., longitude 45°02' W.; depth 823 m.; dynamic height 970.867													
0	8.45	33.70	0	8.45	33.70	26.21	0	8.45	33.70	0	8.45	33.70	26.21
25	5.58	34.05	25	5.58	34.05	26.87	25	5.58	34.05	25	5.58	34.05	26.87
51	3.81	34.30	50	3.90	34.30	27.26	51	3.81	34.30	50	3.90	34.30	27.26
76	2.75	34.40	75	2.75	34.40	27.45	76	2.75	34.40	75	2.75	34.40	27.45
102	2.80	34.51	100	2.80	34.50	27.52	102	2.80	34.51	100	2.80	34.50	27.52
152	3.09	34.67	150	3.10	34.66	27.63	152	3.09	34.67	150	3.10	34.66	27.63
203	3.63	34.78	200	3.60	34.77	27.67	203	3.63	34.78	200	3.60	34.77	27.67
305	3.70	34.87	300	3.70	34.87	27.74	305	3.70	34.87	300	3.70	34.87	27.74
404	3.58	34.88	400	3.60	34.88	27.75	404	3.58	34.88	400	3.60	34.88	27.75
597	3.34	34.88	600	3.35	34.88	27.77	597	3.34	34.88	600	3.35	34.88	27.77
758	3.25	34.875	(800)	3.20	34.87	27.79	758	3.25	34.875	(800)	3.20	34.87	27.79
Station 5623; June 28; latitude 47°23' N., longitude 45°02' W.; depth 194 m.; dynamic height 970.961													
0	11.01	33.69	0	11.01	33.69	25.78	0	11.01	33.69	0	11.01	33.69	25.78
25	6.06	33.73	25	6.06	33.73	26.56	25	6.06	33.73	25	6.06	33.73	26.56
51	4.96	33.83	50	5.00	33.82	26.77	51	4.96	33.83	50	5.00	33.82	26.77
76	4.46	33.93	75	4.50	33.92	26.90	76	4.46	33.93	75	4.50	33.92	26.90
102	3.64	34.03	100	3.65	34.02	27.07	102	3.64	34.03	100	3.65	34.02	27.07
153	3.50	34.35	150	3.50	34.33	27.32	153	3.50	34.35	150	3.50	34.33	27.32

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values			σ_t	Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	
Station 5629; June 29; latitude 48°32' N., longitude 44°15' W.; depth 1,646 m.; dynamic height 970.840													
0	9.24	33.91	0	9.24	33.91	26.25	0	9.04	33.40	0	9.04	33.40	25.81
25	4.47	34.31	25	4.47	34.31	27.21	25	4.07	33.76	25	4.07	33.76	26.81
51	3.13	34.52	50	3.15	34.51	27.50	49	3.41	34.19	50	3.40	34.20	27.23
76	2.71	34.63	75	2.75	34.62	27.63	74	2.84	34.39	75	2.85	34.39	27.43
101	2.69	34.67	100	2.70	34.67	27.67	99	2.93	34.46	100	2.95	34.46	27.48
152	2.83	34.72	150	2.85	34.72	27.70	148	3.41	34.68	150	3.40	34.68	27.61
203	3.05	34.78	200	3.05	34.78	27.72	197	3.33	34.74	200	3.35	34.74	27.66
304	3.27	34.82	300	3.25	34.82	27.74	296	3.74	34.87	300	3.75	34.87	27.73
413	3.26	34.84	400	3.25	34.84	27.75	390	3.61	34.87	400	3.60	34.87	27.75
610	3.29	34.86	600	3.30	34.86	27.77	597	3.34	34.87	600	3.30	34.87	27.78
800	3.25	34.86	800	3.30	34.86	27.77							
1,003	3.26	34.87	1,000	3.25	34.87	27.78							
1,517	3.30	34.88											
Station 5630; June 29; latitude 48°30' N., longitude 43°30' W.; depth 3,109 m.; dynamic height 970.862													
0	10.17	33.95	0	10.17	33.95	26.12	0	9.82	33.47	0	9.82	33.47	25.81
25	7.62	34.26	25	7.62	34.26	26.77	24	6.33	33.61	25	6.25	33.61	26.45
50	4.08	34.47	50	4.08	34.47	27.38	49	4.01	33.78	50	3.95	33.79	26.84
75	3.51	34.56	75	3.51	34.56	27.51	73	3.32	33.99	75	3.35	34.02	27.10
100	2.76	34.65	100	2.76	34.65	27.65	98	3.43	34.27	100	3.45	34.29	27.29
150	2.82	34.70	150	2.82	34.70	27.68	145	3.65	34.53	150	3.70	34.55	27.48
199	3.25	34.79	200	3.25	34.79	27.71	194	3.94	34.71	200	3.95	34.73	27.59
299	3.32	34.83	300	3.35	34.83	27.73	292	4.06	34.84	300	4.05	34.84	27.67
389	3.26	34.84	400	3.30	34.84	27.75							
580	3.35	34.88	600	3.35	34.87	27.77							
768	3.31	34.87	800	3.35	34.87	27.77							
965	3.31	34.87	1,000	3.30	34.87	27.78							
1,409	3.30	34.885											
Station 5631; June 29; latitude 47°57.5' N., longitude 43°28' W.; depth 2,944 m.; dynamic height 970.909													
0	12.30	34.16	0	12.30	34.16	25.89	0	10.42	33.57	0	10.42	33.57	25.79
25	5.63	34.13	25	5.63	34.13	26.93	26	5.92	33.72	25	6.20	33.71	26.53
50	6.50	34.66	50	6.50	34.66	27.24	51	4.75	33.89	50	4.80	33.89	26.84
76	5.28	34.58	75	5.30	34.58	27.32	77	4.15	33.97	75	4.15	33.96	26.96
101	5.78	34.87	100	5.75	34.87	27.51	103	3.86	34.06	100	3.90	34.05	27.06
151	5.44	34.86	150	5.45	34.86	27.53	153	4.21	34.48	150	4.20	34.46	27.36
202	4.75	34.86	200	4.80	34.86	27.61	204	4.14	34.69	200	4.15	34.68	27.53
303	3.63	34.79	300	3.65	34.79	27.67							
406	4.07	34.91	400	4.05	34.91	27.73							
601	3.74	34.90	600	3.75	34.90	27.75							
792	3.56	34.895	800	3.60	34.89	27.76							
994	3.43	34.88	1,000	3.45	34.88	27.76							
1,507	3.35	34.89											
Station 5632; June 30; latitude 47°22' N., longitude 43°26' W.; depth 1,463 m.; dynamic height 970.855													
0	10.58	33.61	0	10.58	33.61	25.79	0	10.34	33.60	0	10.34	33.60	25.82
25	6.28	34.23	25	6.28	34.23	26.92	26	6.16	33.79	25	6.25	33.79	26.59
50	3.88	34.50	50	3.88	34.50	27.42	53	5.33	33.80	50	5.45	33.89	26.77
75	3.26	34.53	75	3.26	34.53	27.50	79	4.49	33.95	75	4.65	33.94	26.89
101	2.87	34.59	100	2.90	34.58	27.58	105	3.77	34.08	100	3.85	34.06	27.07
151	2.77	34.69	150	2.80	34.69	27.67	157	3.59	34.38	150	3.60	34.35	27.33
201	3.07	34.78	200	3.10	34.78	27.72							
302	3.30	34.83	300	3.30	34.83	27.74							
387	3.29	34.85	400	3.30	34.85	27.76							
577	3.30	34.87	600	3.30	34.87	27.78							
765	3.26	34.87	800	3.30	34.87	27.78							
963	3.26	34.87	1,000	3.25	34.87	27.78							
1,472	3.29	34.90											
Station 5633; June 30; latitude 47°21' N., longitude 43°51' W.; depth 624 m.; dynamic height 970.887													
0	9.04	33.40	0	9.04	33.40	25.81	0	9.04	33.40	0	9.04	33.40	25.81
25	4.07	33.76	25	4.07	33.76	26.81	25	4.07	33.76	25	4.07	33.76	26.81
49	3.41	34.19	50	3.40	34.20	27.23	49	3.41	34.19	50	3.40	34.20	27.23
74	2.84	34.39	75	2.85	34.39	27.43	74	2.84	34.39	75	2.85	34.39	27.43
99	2.93	34.46	100	2.95	34.46	27.48	99	2.93	34.46	100	2.95	34.46	27.48
148	3.41	34.68	150	3.40	34.68	27.61	148	3.41	34.68	150	3.40	34.68	27.61
197	3.33	34.74	200	3.35	34.74	27.66	197	3.33	34.74	200	3.35	34.74	27.66
296	3.74	34.87	300	3.75	34.87	27.73	296	3.74	34.87	300	3.75	34.87	27.73
390	3.61	34.87	400	3.60	34.87	27.75	390	3.61	34.87	400	3.60	34.87	27.75
597	3.34	34.87	600	3.30	34.87	27.78	597	3.34	34.87	600	3.30	34.87	27.78
Station 5634; June 30; latitude 47°20.5' N., longitude 44°09' W.; depth 325 m.; dynamic height 970.934													
0	9.82	33.47	0	9.82	33.47	25.81	0	9.82	33.47	0	9.82	33.47	25.81
24	6.33	33.61	25	6.25	33.61	26.45	24	6.33	33.61	25	6.25	33.61	26.45
49	4.01	33.78	50	3.95	33.79	26.84	49	4.01	33.78	50	3.95	33.79	26.84
73	3.32	33.99	75	3.35	34.02	27.10	73	3.32	33.99	75	3.35	34.02	27.10
98	3.43	34.27	100	3.45	34.29	27.29	98	3.43	34.27	100	3.45	34.29	27.29
145	3.65	34.53	150	3.70	34.55	27.48	145	3.65	34.53	150	3.70	34.55	27.48
194	3.94	34.71	200	3.95	34.73	27.59	194	3.94	34.71	200	3.95	34.73	27.59
292	4.06	34.84	300	4.05	34.84	27.67	292	4.06	34.84	300	4.05	34.84	27.67
Station 5635; June 30; latitude 47°20' N., longitude 44°28' W.; depth 225 m.; dynamic height 970.955													
0	10.42	33.57	0	10.42	33.57	25.79	0	10.42	33.57	0	10.42	33.57	25.79
26	5.92	33.72	25	6.20	33.71	26.53	26	5.92	33.72	25	6.20	33.71	26.53
51	4.75	33.89	50	4.80	33.89	26.84	51	4.75	33.89	50	4.80	33.89	26.84
77	4.15	33.97	75	4.15	33.96	26.96	77	4.15	33.97	75	4.15	33.96	26.96
103	3.86	34.06	100	3.90	34.05	27.06	103	3.86	34.06	100	3.90	34.05	27.06
153	4.21	34.48	150	4.20	34.46	27.36	153	4.21	34.48	150	4.20	34.46	27.36
204	4.14	34.69	200	4.15	34.68	27.53	204	4.14	34.69	200	4.15	34.68	27.53
Station 5636; June 30; latitude 47°20' N., longitude 45°00' W.; depth 169 m.; dynamic height 970.959													
0	10.34	33.60	0	10.34	33.60	25.82	0	10.34	33.60	0	10.34	33.60	25.82
26	6.16	33.79	25	6.25	33.79	26.59	26	6.16	33.79	25	6.25	33.79	26.59
53	5.33	33.80	50	5.45	33.89	26.77	53	5.33	33.80	50	5.45	33.89	26.77
79	4.49	33.95	75	4.65	33.94	26.89	79	4.49	33.95	75	4.65	33.94	26.89
105	3.77	34.08	100	3.85	34.06	27.07	105	3.77	34.08	100	3.85	34.06	27.07
157	3.59	34.38	150	3.60	34.35	27.33	157	3.59	34.38	150	3.60	34.35	27.33
Station 5637; June 30; latitude 47°19.5' N., longitude 45°20' W.; depth 224 m.; dynamic height 970.957													
0	10.69	33.67	0	10.60	33.67	25.84	0	10.69	33.67	0	10.60	33.67	25.84
26	6.20	33.86	25	6.40	33.86	26.62	26	6.20	33.86	25	6.40	33.86	26.62
52	5.37	33.88	50	5.50	33.88	26.75	52	5.37	33.88	50	5.50	33.88	26.75
78	3.94	33.92	75	4.10	33.91	26.93	78	3.94	33.92	75	4.10	33.91	26.93
104	3.63	34.08	100	3.65	34.05	27.09	104	3.63	34.08	100	3.65	34.05	27.09
156	3.53	34.40	150	3.55	34.38	27.35	156	3.53	34.40	150	3.55	34.38	27.35
208	3.97	34.63	200	3.85	34.59	27.49	208	3.97	34.63	200	3.85	34.59	27.49
Station 5638; June 30; latitude 47°20' N., longitude 45°40' W.; depth 272 m.; dynamic height 970.955													
0	10.43	33.58	0	10.43	33.58	25.78	0	10.43	33.58	0	10.43	33.58	25.78
25	6.49	33.76	25	6.49	33.76	26.53	25	6.49	33.76	25	6.49	33.76	26.53
50	4.54	33.74	50	4.54	33.74	26.75	50	4.54	33.74	50	4.54	33.74	26.75
75	4.13	33.92	75	4.13	33.92	26.93	75	4.13	33.92	75	4.13	33.92	26.93
100	3.65	34.09	100	3.65	34.09	27.12	100	3.65	34.09	100	3.65	34.09	27.12
150	3.98	3											

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5639; June 30; latitude 47°19.5' N., longitude 45°58' W.; depth 327 m.; dynamic height 970.940								Station 5644; July 1; latitude 47°13' N., longitude 47°53' W.; depth 170m.; dynamic height 971.035							
0	9.49	33.49		0	9.49	33.49	25.87	0	8.77	32.62		0	8.77	32.62	25.31
25	5.82	33.73		25	5.82	33.73	26.59	25	3.05	32.73		25	3.05	32.73	26.10
51	4.23	33.85		50	4.25	33.84	26.85	51	-0.69	33.13		50	-0.65	33.11	26.63
76	3.97	34.04		75	4.00	34.04	27.04	76	-1.41	33.25		75	-1.40	33.25	26.76
102	2.79	34.12		100	2.80	34.11	27.22	101	-1.15	33.39		100	-1.15	33.38	26.87
152	3.39	34.47		150	3.35	34.45	27.43	152	-0.03	33.80		150	-0.10	33.78	27.14
203	3.88	34.67		200	3.85	34.66	27.55								
305	3.69	34.84		300	3.70	34.83	27.70								
Station 5640; June 30; latitude 47°19' N., longitude 46°28' W.; depth 663 m.; dynamic height 970.895								Station 5645; July 1; latitude 47°11' N., longitude 48°34' W.; depth 121 m.; dynamic height 971.044							
0	9.27	33.23		0	9.27	33.23	25.71	0	8.46	32.55		0	8.46	32.55	25.30
25	2.78	33.56		25	2.78	33.56	26.78	25	2.88	32.69		25	2.88	32.69	26.07
50	1.65	33.88		50	1.65	33.88	27.11	51	-0.40	32.97		50	-0.30	32.95	26.48
75	2.12	34.28		75	2.12	34.28	27.40	76	-1.25	33.21		75	-1.25	33.20	26.72
101	2.40	34.42		100	2.40	34.41	27.49	102	-1.22	33.35		100	-1.20	33.34	26.84
151	3.05	34.62		150	3.05	34.61	27.59								
201	3.18	34.71		200	3.15	34.71	27.66								
302	3.58	34.83		300	3.60	34.83	27.71								
405	3.66	34.87		400	3.65	34.87	27.74								
595	3.49	34.87		600	3.50	34.87	27.76								
Station 5641; June 30; latitude 47°18' N., longitude 46°43' W.; depth 1,143 m.; dynamic height 970.880								Station 5646; July 1; latitude 47°09.5' N., longitude 49°08' W.; depth 89 m.; dynamic height 971.054							
0	9.31	33.19		0	9.31	33.19	25.67	0	8.85	32.58		0	8.85	32.58	25.27
25	3.01	33.78		25	3.01	33.78	26.93	26	3.54	32.66		25	3.90	32.66	25.96
51	2.62	34.24		50	2.65	34.24	27.33	53	0.79	32.79		50	0.95	32.78	26.29
76	2.49	34.34		75	2.50	34.34	27.42	79	-0.59	33.22		75	-0.45	33.14	26.65
101	2.30	34.47		100	2.30	34.47	27.55								
152	2.50	34.62		150	2.50	34.61	27.64								
203	2.82	34.70		200	2.80	34.69	27.67								
304	3.32	34.82		300	3.33	34.82	27.74								
432	3.41	34.84		400	3.40	34.84	27.74								
640	3.51	34.88		600	3.50	34.87	27.76								
844	3.39	34.87		800	3.45	34.87	27.76								
1,069	3.29	34.87		1,000	3.30	34.87	27.78								
Station 5642; June 30; latitude 47°16.5' N., longitude 47°02' W.; depth 1005 m.; dynamic height 970.910								Station 5647; July 1; latitude 46°50.5' N., longitude 48°42' W.; depth 87 m.; dynamic height 971.057							
0	7.15	32.63		0	7.15	32.63	25.56	0	10.65	32.50		0	10.65	32.50	24.91
25	4.76	33.69		25	4.76	33.69	26.69	26	3.96	32.69		25	4.20	32.68	25.95
51	1.01	34.10		50	1.00	34.09	27.33	51	0.64	32.84		50	0.75	32.83	26.34
76	1.07	34.19		75	1.05	34.19	27.41	77	-0.85	33.11		75	-0.75	33.08	26.61
101	1.91	34.41		100	1.90	34.40	27.52								
152	2.44	34.56		150	2.40	34.56	27.61								
203	2.52	34.61		200	2.50	34.61	27.64								
304	2.60	34.63		300	2.60	34.63	27.64								
404	2.75	34.70		400	2.75	34.70	27.69								
600	3.20	34.81		600	3.20	34.81	27.74								
793	3.34	34.85		800	3.35	34.85	27.75								
1,006	3.31	34.88		1,000	3.30	34.88	27.78								
Station 5643; July 1; latitude 47°15' N., longitude 47°30' W.; depth 220 m.; dynamic height 971.009								Station 5648; July 1; latitude 46°50.5' N., longitude 48°08' W.; depth 117 m.; dynamic height 971.052							
0	8.21	32.24		0	8.21	32.24	25.10	0	10.21	32.56		0	10.21	32.56	25.04
26	1.07	33.06		25	1.40	33.04	26.47	25	3.29	32.64		25	3.29	32.64	26.00
51	-0.73	33.24		50	-0.70	33.24	26.74	50	0.31	32.82		50	0.31	32.82	26.36
77	-1.15	33.40		75	-1.15	33.39	26.88	76	-1.12	33.11		75	-1.10	33.10	26.63
102	-0.83	33.58		100	-0.85	33.56	27.00	101	-0.41	33.42		100	-0.40	33.41	26.87
154	0.36	33.97		150	0.25	33.95	27.27								
205	1.48	34.29		200	1.40	34.26	27.45								
Station 5649; July 1; latitude 46°50.5' N., longitude 47°38' W.; depth 170 m.; dynamic height 971.023								Station 5650; July 1; latitude 46°50.5' N., longitude 47°18' W.; depth 335 m.; dynamic height 970.998							
0	8.28	32.55		0	8.28	32.55	25.32	0	11.05	32.20		0	11.05	32.20	24.61
25	0.67	32.89		25	0.67	32.89	26.38	25	0.92	33.06		25	0.92	33.06	26.51
51	-1.44	33.15		50	-1.11	33.33	27.04	50	-1.11	33.33		50	-1.11	33.33	26.82
76	-1.49	33.31		75	-0.66	33.61	27.43	75	-0.66	33.61		75	-0.66	33.61	27.04
101	-1.08	33.43		100	-0.29	33.78	27.15	100	-0.29	33.78		100	-0.29	33.78	27.15
152	0.26	33.86		150	1.11	34.16	27.39	150	1.11	34.16		150	1.11	34.16	27.39
				200	1.78	34.37	27.51	200	1.78	34.37		200	1.78	34.37	27.51
				300	2.11	34.49	27.57	300	2.11	34.49		300	2.11	34.49	27.57

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values					Observed values			Scaled values																		
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t																
Station 5651; July 1; latitude 46°50.5' N., longitude 47°12' W.; depth 718 m.; dynamic height 970.971															Station 5656; July 2; latitude 46°49' N., longitude 45°21' W.; depth 224 m.; dynamic height 970.946														
0	11.02	32.61	0	11.02	32.61	24.93	0	11.38	33.62	0	11.38	33.62	25.66																
25	2.25	33.28	25	2.25	33.28	26.60	25	6.18	33.74	25	6.18	33.74	26.55																
51	-0.98	33.49	50	-0.95	33.47	26.94	49	4.70	33.86	50	4.70	33.87	26.84																
76	-0.42	33.75	75	-0.45	33.73	27.12	74	4.04	33.98	75	4.00	33.99	27.00																
101	0.11	33.94	100	0.10	33.93	27.25	99	3.77	34.07	100	3.80	34.08	27.09																
152	1.16	34.23	150	1.10	34.22	27.44	148	3.92	34.45	150	3.95	34.46	27.38																
203	1.88	34.42	200	1.85	34.41	27.53	197	4.17	34.72	200	4.20	34.73	27.57																
304	2.51	34.60	300	2.50	34.59	27.62																							
412	2.65	34.68	400	2.65	34.67	27.68																							
608	2.87	34.74	600	2.90	34.74	27.71																							
Station 5652; July 1; latitude 46°50.5' N., longitude 46°51' W.; depth 1,188 m.; dynamic height 970.894															Station 5657; July 2; latitude 46°49' N., longitude 45°04' W.; depth 169 m.; dynamic height 970.953														
0	10.15	33.10	0	10.15	33.10	25.46	0	11.04	33.69	0	11.04	33.69	25.77																
25	3.43	33.75	25	3.43	33.75	26.86	25	7.07	33.79	25	7.25	33.79	26.45																
50	3.72	34.13	50	3.72	34.13	27.14	52	5.80	33.80	50	5.85	33.80	26.65																
96	1.90	34.31	75	1.40	34.31	27.45	77	4.36	33.90	75	4.45	33.89	26.87																
101	2.23	34.43	100	2.25	34.43	27.51	103	3.55	34.06	100	3.60	34.04	27.08																
151	3.05	34.63	150	3.05	34.62	27.60	155	3.77	34.47	150	3.75	34.43	27.37																
202	3.48	34.74	200	3.45	34.73	27.64																							
303	3.51	34.82	300	3.50	34.82	27.72																							
426	3.56	34.87	400	3.55	34.86	27.74																							
632	3.49	34.87	600	3.50	34.87	27.76																							
836	3.42	34.90	800	3.45	34.89	27.77																							
1,063	3.30	34.88	1,000	3.35	34.89	27.78																							
Station 5653; July 1; latitude 46°50' N., longitude 46°32' W.; depth 574 m.; dynamic height 970.903															Station 5658; July 2; latitude 46°49' N., longitude 44°32' W.; depth 212 m.; dynamic height 970.943														
0	11.01	33.24	0	11.01	33.24	25.43	0	10.94	33.49	0	10.94	33.49	25.63																
25	3.02	33.54	25	3.02	33.54	26.74	25	6.59	33.83	25	6.59	33.83	26.57																
51	1.23	33.88	50	1.25	33.87	27.14	50	5.35	33.83	50	5.35	33.83	26.73																
76	1.73	34.16	75	1.70	34.14	27.32	76	3.32	33.94	75	3.35	33.94	27.03																
101	2.35	34.39	100	2.35	34.37	27.46	101	3.57	34.07	100	3.55	34.06	27.11																
152	3.40	34.66	150	3.35	34.65	27.59	151	4.02	34.45	150	4.00	34.44	27.36																
203	3.97	34.81	200	3.95	34.80	27.65	202	4.01	34.66	200	4.00	34.65	27.53																
304	3.89	34.85	300	3.90	34.85	27.70																							
405	3.65	34.86	400	3.70	34.86	27.73																							
551	3.45	34.86																											
Station 5654; July 2; latitude 46°5' N., longitude 46°08' W.; depth 320 m.; dynamic height 970.941															Station 5659; July 2; latitude 46°49' N., longitude 44°15' W.; depth 322 m.; dynamic height 970.904														
0	11.87	33.64	0	11.87	33.64	25.58	0	10.37	33.38	0	10.37	33.38	25.65																
25	5.84	33.80	25	5.84	33.80	26.65	25	4.87	33.57	25	4.87	33.57	26.59																
50	5.56	33.88	50	5.56	33.88	26.74	50	2.87	33.74	50	2.87	33.74	26.91																
75	4.00	33.98	75	4.00	33.98	26.99	75	3.53	34.27	75	3.53	34.27	27.27																
100	3.45	34.10	100	3.45	34.10	27.14	100	2.16	34.28	100	2.16	34.28	27.40																
150	2.57	34.36	150	2.57	34.36	27.44	150	2.98	34.56	150	2.98	34.56	27.56																
200	3.76	34.68	200	3.76	34.68	27.57	201	3.53	34.74	200	3.55	34.74	27.64																
300	3.60	34.85	300	3.60	34.85	27.73	301	3.78	34.86	300	3.75	34.86	27.72																
Station 5655; July 2; latitude 46°49.5' N., longitude 45°44' W.; depth 260 m.; dynamic height 970.940															Station 5660; July 2; latitude 46°49' N., longitude 44°01' W.; depth 622 m.; dynamic height 970.871														
0	11.35	33.61	0	11.35	33.61	25.65	0	10.36	33.45	0	10.36	33.45	25.70																
25	5.85	33.80	25	5.85	33.80	26.65	25	3.40	33.84	25	3.40	33.84	26.94																
50	4.86	33.88	50	4.86	33.88	26.82	50	3.73	34.25	50	3.73	34.25	27.24																
76	3.91	33.99	75	3.95	33.99	27.01	75	3.01	34.44	75	3.01	34.44	27.46																
101	3.52	34.19	100	3.55	34.19	27.21	101	3.15	34.55	100	3.15	34.54	27.52																
151	3.54	34.46	150	3.55	34.46	27.42	151	3.43	34.70	150	3.40	34.70	27.63																
202	3.71	34.61	200	3.70	34.60	27.52	201	3.44	34.77	200	3.45	34.77	27.68																
							302	3.48	34.82	300	3.45	34.82	27.72																
							411	3.46	34.87	400	3.45	34.87	27.76																
							611	3.28	34.87	600	3.30	34.87	27.78																

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t

Station 5661; July 2; latitude 46°49' N., longitude 43°26' W.; depth 2240 m.; dynamic height 970.890

0	12.61	33.66	0	12.61	33.66	25.45
25	4.64	33.96	25	4.64	33.96	26.91
49	3.93	34.16	50	3.95	34.16	27.15
74	3.96	34.39	75	3.95	34.39	27.33
98	3.16	34.47	100	3.20	34.48	27.47
148	3.44	34.68	150	3.45	34.68	27.60
197	3.18	34.73	200	3.20	34.73	27.67
295	3.21	34.79	300	3.20	34.79	27.72
402	3.28	34.84	400	3.30	34.84	27.75
600	3.29	34.86	600	3.30	34.86	27.77
795	3.28	34.865	800	3.30	34.86	27.77
1,001	3.26	34.86	1,000	3.25	34.86	27.77
1,526	3.29	34.90				

Station 5662; Aug 21; latitude 50°01' N., longitude 48°59' W.; depth 1,870 m.; dynamic height 970.872

0	11.48	33.11	0	11.48	33.11	25.24
25	5.71	34.39	25	5.71	34.39	27.13
49	4.55	34.85	50	4.55	34.85	27.41
74	3.92	34.62	75	3.95	34.62	27.51
99	3.93	34.68	100	3.90	34.68	27.56
148	3.41	34.71	150	3.45	34.71	27.63
197	3.81	34.83	200	3.70	34.83	27.70
268	3.34	34.85	300	3.50	34.85	27.74
553	3.14	34.84	400	3.30	34.85	27.76
740	3.21	34.84	600	3.15	34.84	27.76
934	3.18	34.83	800	3.20	34.84	27.76
1,432	3.22	34.89	1,000	3.20	34.84	27.76

Station 5663; Aug. 21; lat. 49°49' N. longitude 49°29' W.; depth 1,293 m.; dynamic height 970.851

0	11.23	32.72	0	11.23	32.72	24.98
25	4.05	34.41	25	4.05	34.41	27.34
51	3.54	34.65	50	3.55	34.65	27.57
76	3.45	34.73	75	3.45	34.73	27.64
101	3.34	34.78	100	3.35	34.78	27.69
152	3.16	34.78	150	3.20	34.78	27.71
203	3.33	34.82	200	3.30	34.82	27.74
304	3.26		300	3.30	34.81	27.73
398	3.09	34.79	400	3.10	34.79	27.73
593	3.03	34.84	600	3.05	34.84	27.77
784	3.10	34.84	800	3.10	34.84	27.77
960	3.12	34.84	1,000	3.15	34.84	27.76
1,287	3.17	34.86				

Station 5664; Aug. 22; latitude 49°36' N., longitude 50°02' W.; depth 626 m.; dynamic height 970.903

0	9.74	31.63	0	9.74	31.63	24.38
25	3.02	34.12	25	3.02	34.12	27.20
49	1.62	34.21	50	1.65	34.32	27.48
74	2.44		75	2.50	34.49	27.54
98	3.03	34.59	100	3.05	34.60	27.58
147	3.42	34.72	150	3.45	34.72	27.64
196	3.47	34.75	200	3.50	34.75	27.66
294	3.54		300	3.55	34.78	27.67
395	3.55	34.79	400	3.55	34.79	27.68
597	3.23	34.81	600	3.20	34.81	27.74

Observed values			Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t

Station 5665; Aug. 22; latitude 49°29' N., longitude 50°21' W.; depth 319 m.; dynamic height 970.936

0	11.19	31.92	0	11.19	31.92	24.37
25	-0.86	33.54	25	-0.86	33.54	26.98
50	-0.46	33.81	50	-0.46	33.81	27.19
75	-0.02	33.94	75	-0.02	33.94	27.27
99	0.47	34.11	100	0.50	34.12	27.39
149	1.59	34.36	150	1.60	34.37	27.52
199	2.77	34.56	200	2.80	34.56	27.57
298	3.15		(300)	3.15	34.72	27.67

Station 5666; Aug. 22; latitude 49°17' N., longitude 50°59' W.; depth 325 m.; dynamic height 971.010

0	12.03	31.70	0	12.03	31.70	24.04
25	0.65	32.78	25	0.65	32.78	26.31
49	-1.41	33.17	50	-1.40	33.17	26.70
74	-1.19	33.41	75	-1.20	33.42	26.91
99	-1.06	33.62	100	-1.05	33.63	27.06
148	-0.01	33.96	150	0.00	33.98	27.30
197	1.39	34.25	200	1.45	34.26	27.44
296	2.86		(300)	2.90	34.61	27.61

Station 5667; Aug. 22; latitude 49°07.5' N., longitude 51°29' W.; depth 317 m.; dynamic height 971.083

0	11.48	31.40	0	11.48	31.40	23.92
25	0.66	32.76	25	0.66	32.76	26.29
50	-1.38	33.00	50	-1.38	33.00	26.57
74	-1.58	33.14	75	-1.55	33.14	26.68
99	-1.58	33.24	100	-1.55	33.24	26.75
149	-1.18	33.52	150	-1.15	33.53	26.99
198	-0.34		200	-0.30	33.78	27.15
292	2.19	34.20	(300)	2.35	34.24	27.35

Station 5668; Aug. 22; latitude 49°01' N., longitude 51°48' W.; depth 324 m.; dynamic height 971.096

0	11.72	31.29	0	11.72	31.29	23.78
23	0.38	32.63	25	0.10	32.70	26.27
46	-1.18	32.99	50	-1.30	33.01	26.57
69	-1.56	33.10	75	-1.60	33.11	26.66
93	-1.62	33.14	100	-1.60	33.17	26.71
139	-1.45	33.38	150	-1.35	33.43	26.91
185	-0.90		200	-0.60	33.68	27.08
278	1.44	34.05	(300)	1.95	34.17	27.34

Station 5669; Aug. 22; latitude 48°57' N., longitude 52°02' W.; depth 324 m.; dynamic height 971.110

0	11.44	31.32	0	11.44	31.32	23.86
25	0.26	32.62	25	0.26	32.62	26.20
50	-1.44	32.99	50	-1.44	32.99	26.56
75	-1.62	33.12	75	-1.62	33.12	26.67
100	-1.63	33.16	100	-1.63	33.16	26.70
150	-1.51	33.34	150	-1.51	33.34	26.85
199	-0.94		200	-0.95	33.56	27.01
299	1.51	34.00	300	1.50	34.00	27.23

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5670; Aug. 22; latitude 48°49.5' N., longitude 52°21' W.; depth 351 m.; dynamic height 971.090								Station 5676; Aug. 23; latitude 48°20' N., longitude 51°42' W.; depth 178 m.; dynamic height 971.066							
0	11.20	31.32		0	11.20	31.32	23.90	0	12.26	31.30		0	12.26	31.30	23.69
24	-0.27	32.64		25	-0.30	32.67	26.26	26	0.17	32.78		25	0.25	32.68	26.25
49	-1.39	33.01		50	-1.40	33.02	26.58	52	-1.55	33.04		50	-1.50	33.03	26.59
73	-1.62	33.09		75	-1.65	33.09	26.64	78	-1.65	33.14		75	-1.65	33.14	26.68
98	-1.67	33.15		100	-1.65	33.16	26.70	104	-1.60	33.24		100	-1.60	33.23	26.75
147	-1.54	33.30		150	-1.50	33.31	26.82	155	-0.70	33.62		150	-0.80	33.57	27.01
195	-1.02	33.58		200	-0.95	33.62	27.06								
293	1.01	34.19		(300)	1.20	34.24	27.44								
Station 5671; Aug. 22; latitude 48°42.5' N., longitude 52°41' W.; depth 216 m.; dynamic height 971.087								Station 5677; Aug. 23; latitude 48°16' N., longitude 51°25' W.; depth 179 m.; dynamic height 971.062							
0	10.93			0	10.93	31.24	23.89	0	12.38	31.36		0	12.38	31.36	23.72
25	0.91	32.42		25	0.91	32.42	26.00	25	1.19	32.88		25	1.19	32.88	26.35
49	-1.12	32.90		50	-1.15	32.91	26.48	51	-1.11	33.05		50	-1.05	33.05	26.60
74	-1.51	33.05		75	-1.50	33.05	26.60	76	-1.51	33.15		75	-1.50	33.15	26.68
98	-1.59	33.12		100	-1.60	33.13	26.67	101	-1.45	33.25		100	-1.45	33.24	26.76
147	-1.39	33.40		150	-1.35	33.42	26.91	153	-1.01	33.55		150	-1.05	33.53	26.98
196	-1.19			(200)	-1.15	33.75	27.17								
Station 5672; Aug. 22; latitude 48°37' N., longitude 52°53' W.; depth 172 m.; dynamic height 971.099								Station 5678; Aug. 23; latitude 48°10.5' N., longitude 51°03' W.; depth 172 m.; dynamic height 971.061							
0	11.49	31.18		0	11.49	31.18	23.74	0	12.69	31.27		0	12.69	31.27	23.60
25	0.82	32.24		25	0.82	32.24	25.86	25	2.83	32.61		25	2.83	32.61	26.02
51	-1.06	32.89		50	-1.00	32.88	26.45	50	-0.91	33.07		50	-0.91	33.07	26.61
76	-1.49	33.04		75	-1.45	33.04	26.60	75	-1.49	33.22		75	-1.49	33.22	26.75
101	-1.57			100	-1.55	33.09	26.64	100	-1.45	33.35		100	-1.45	33.35	26.84
142	-1.56	33.21		(150)	-1.55	33.24	26.76	150	-0.44	33.72		150	-0.44	33.72	27.12
Station 5673; Aug. 22; latitude 48°34' N., longitude 52°40' W.; depth 260 m.; dynamic height 971.087								Station 5679; Aug. 23; latitude 47°56' N., longitude 50°39' W.; depth 115 m.; dynamic height 971.049							
0	10.93	31.24		0	10.93	31.24	23.89	0	13.11	31.64		0	13.11	31.64	23.80
25	0.88	32.47		25	0.88	32.47	26.04	25	0.04	32.92		25	0.04	32.92	26.45
50	-0.68	32.82		50	-0.68	32.82	26.40	51	-1.20	33.06		50	-1.15	33.06	26.61
75	-1.39	33.05		75	-1.39	33.05	26.60	76	-1.47	33.18		75	-1.45	33.18	26.71
100	-1.58	33.14		100	-1.58	33.14	26.68	102	-1.18	33.37		100	-1.20	33.35	26.84
151	-1.44	33.36		150	-1.40	33.36	26.85								
201	-1.06			200	-1.05	33.58	27.02								
241	-0.46	33.74													
Station 5674; Aug. 23; latitude 48°28' N., longitude 52°16' W.; depth 233 m.; dynamic height 971.083								Station 5680; Aug. 23; latitude 47°39.5' N., longitude 50°19' W.; depth 115 m.; dynamic height 971.060							
0	11.08	31.35		0	11.08	31.35	23.94	0	13.54	31.78		0	13.54	31.78	23.82
23	0.09	32.67		25	-0.20	32.70	26.28	26	3.97	32.64		25	4.20	32.62	25.90
47	-1.20	32.92		50	-1.25	32.93	26.50	51	-1.01	33.10		50	-0.90	33.09	26.62
70	-1.49	33.07		75	-1.55	33.08	26.63	77	-1.54	33.23		75	-1.50	33.22	26.75
93	-1.60	33.11		100	-1.60	33.13	26.67	103	-1.32	33.40		100	-1.35	33.38	26.87
140	-1.60	33.25		150	-1.55	33.29	26.80								
186	-1.30	33.46		(200)	-1.15	33.53	26.99								
Station 5675; Aug. 23; latitude 48°25' N., longitude 52°02' W.; depth 210 m.; dynamic height 971.085								Station 5681; Aug. 23; latitude 47°26' N., longitude 50°00' W.; depth 77 m.; dynamic height 971.052							
0	12.19	31.30		0	12.19	31.30	23.71	0	13.96	31.66		0	13.96	31.66	23.64
25	0.59	32.35		25	0.59	32.35	25.96	27	1.88	32.76		25	2.10	32.69	26.13
50	-1.07	32.96		50	-1.07	32.96	26.52	53	-1.27	33.10		50	-1.25	33.08	26.62
75	-1.61	33.11		75	-1.61	33.11	26.66	69	-1.10	33.30		(75)	-1.00	33.37	26.85
100	-1.62	33.14		100	-1.62	33.14	26.68								
149	-1.40	33.36		150	-1.40	33.37	26.86								
				(200)	-1.05	33.64	27.07								
Station 5682; Aug. 23; latitude 47°44' N., longitude 49°56' W.; depth 115 m.; dynamic height 971.050								Station 5683; Aug. 23; latitude 47°44' N., longitude 49°56' W.; depth 115 m.; dynamic height 971.050							
0	13.38	31.76		0	13.38	31.76	23.84	0	13.38	31.76		0	13.38	31.76	23.84
24	1.68	32.76		25	1.40	32.79	26.27	24	1.68	32.76		25	1.40	32.79	26.27
48	-0.84	33.06		50	-0.90	33.07	26.61	48	-0.84	33.06		50	-0.90	33.07	26.61
72	-1.14	33.19		75	-1.10	33.22	26.73	72	-1.14	33.19		75	-1.10	33.22	26.73
96	-0.95	33.40		100	-0.90	33.45	26.92	96	-0.95	33.40		100	-0.90	33.45	26.92

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5683; Aug. 23; latitude 47°59' N., longitude 49°54' W.; depth 169 m.; dynamic height 971.073

0	13.05	31.64	0	13.05	31.64	23.80
23	6.55	32.44	25	5.60	32.51	25.66
45	-1.11	33.02	50	-1.25	33.04	26.59
68	-1.51	33.12	75	-1.55	33.16	26.70
91	-1.58	33.24	100	-1.50	33.29	26.80
136	-1.08	33.56	(150)	-0.90	33.69	27.11

Station 5684; Aug. 23; latitude 48°17.5' N., longitude 49°51' W.; depth 224 m.; dynamic height 971.043

0	11.68	31.48	0	11.68	31.48	23.56
23	-0.86	32.82	25	-1.00	32.86	26.44
46	-1.53	33.10	50	-1.55	33.13	26.67
69	-1.59	33.22	75	-1.55	33.25	26.77
93	-1.45	33.36	100	-1.35	33.40	26.89
139	-0.71	33.72	150	-0.50	33.80	27.18
185	0.17	33.99	(200)	0.45	34.06	27.34

Station 5685; Aug. 23; latitude 48°42' N., longitude 49°41' W.; depth 626 m.; dynamic height 970.935

0	10.98	32.08	0	10.98	32.08	24.53
27	4.24	33.28	25	4.65	33.23	26.33
53	0.93	33.93	50	1.10	33.84	27.12
80	1.53	34.25	75	1.45	34.21	27.40
106	2.38	34.47	100	2.20	34.43	27.52
160	2.97	34.64	150	2.90	34.62	27.62
213	3.31	34.72	200	3.30	34.71	27.65
319	3.34	34.73	300	3.30	34.73	27.66
402	3.51	34.79	400	3.50	34.79	27.69
606	3.20		(600)	3.20	34.80	27.73

Station 5686; Aug. 24; latitude 48°48.5' N., longitude 49°38' W.; depth 1,064 m.; dynamic height 970.858

0	10.01	32.27	0	10.01	32.27	24.85
22	4.54	34.00	25	4.00	34.03	27.03
45	2.07	34.21	50	2.20	34.27	27.40
67	3.36	34.60	75	3.30	34.64	27.59
89	3.18	34.64	100	3.20	34.70	27.65
133	3.19	34.72		3.20	34.74	27.68
178	3.13	34.77	200	3.10	34.78	27.72
267	3.04	34.81	300	3.05	34.81	27.75
407	3.05	34.82	400	3.05	34.82	27.76
604	3.07	34.84	600	3.10	34.84	27.77
797	3.12	34.85	800	3.10	34.85	27.78
1,010	3.12	34.87	1,000	3.10	34.87	27.80

Station 5687; Aug. 24; latitude 49°06' N., longitude 49°28' W.; depth 1,485 m.; dynamic height 970.839

0	12.49	32.93	0	12.49	32.93	24.90
25	4.46	34.29	25	4.46	34.29	27.19
49	3.39	34.62	50	3.40	34.63	27.57
74	3.43	34.74	75	3.45	34.74	27.65
98	3.09	34.74	100	3.10	34.74	27.69
147	3.12	34.80	150	3.15	34.80	27.73
196	3.16	34.82	200	3.15	34.82	27.75
294	3.06	34.82	300	3.05	34.82	27.76
398	3.12	34.85	400	3.10	34.85	27.78
592	3.09	34.85	600	3.10	34.85	27.78
783	3.14	34.86	800	3.15	34.86	27.78
983	3.13	34.86	1,000	3.15	34.86	27.78
1,386	3.23	34.88				

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t

Station 5688; Aug. 24; latitude 49°34' N., longitude 49°13' W.; depth 1,622 m.; dynamic height 970.841

0	12.71	33.85	0	12.71	33.85	25.57
24	6.41	34.50	25	6.30	34.51	27.15
49	3.88	34.68	50	3.85	34.68	27.66
74	3.32	34.71	75	3.30	34.71	27.65
98	3.23	34.77	100	3.20	34.77	27.71
147	3.13	34.79	150	3.15	34.79	27.72
196	3.17	34.82	200	3.15	34.82	27.75
294	3.25	34.84	300	3.25	34.84	27.75
391	3.24	34.85	400	3.25	34.85	27.76
583	3.16	34.84	600	3.20	34.84	27.76
773	3.21	34.86	800	3.20	34.86	27.78
972	3.11	34.85	1,000	3.15	34.85	27.77
1,482	3.18	34.88				

Station 5689; Aug. 24; latitude 49°59' N., longitude 49°00' W.; depth 1,788 m.; dynamic height 970.863

0	11.84	33.13	0	11.84	33.13	25.19
26	7.46	33.91	25	7.55	33.88	26.48
52	3.72	34.66	50	3.75	34.60	27.61
78	3.52	34.71	75	3.55	34.70	27.61
104	3.24	34.75	100	3.25	34.74	27.67
154	3.22	34.78	150	3.20	34.77	27.71
206	3.30	34.82	200	3.30	34.82	27.74
310	3.20	34.84	300	3.20	34.84	27.76
408	3.26	34.86	400	3.25	34.86	27.77
607	3.23	34.86	600	3.25	34.86	27.77
804	3.23	34.86	800	3.25	34.86	27.77
1,010	3.17	34.86	1,000	3.20	34.86	27.78
1,534	3.27	34.91				

Station 5690; Aug. 25; latitude 53°43' N., longitude 55°49' W.; depth 130 m.; dynamic height 1,454.985

0	7.33	28.61	0	7.33	28.61	22.38
25	-0.79	32.55	25	-0.79	32.55	26.18
51	-1.45	32.76	50	-1.45	32.76	26.37
76	-1.54	32.81	75	-1.50	32.81	26.42
102	-1.58	32.85	100	-1.60	32.84	26.44

Station 5691; Aug. 25; latitude 53°50.5' N., longitude 55°35' W.; depth 218 m.; dynamic height 1,454.953

0	7.37	28.90	0	7.37	28.90	22.60
25	-0.53	32.47	25	-0.53	32.47	26.11
50	-1.43	32.77	50	-1.43	32.77	26.38
75	-1.48	32.90	75	-1.48	32.90	26.48
100	-1.40	33.08	100	-1.40	33.08	26.63
151	-1.36	33.33	150	-1.35	33.33	26.83
201	-1.02	33.74	200	-1.05	33.73	27.14

Station 5692; Aug. 26; latitude 53°53.5' N., longitude 55°26' W.; depth 178 m.; dynamic height 1,454.912

0	7.47	29.78	0	7.47	29.78	23.27
25	-0.13	32.60	25	-0.13	32.60	26.20
50	-1.30	33.02	50	-1.30	33.02	26.58
75	-1.38	33.17	75	-1.38	33.17	26.70
101	-1.36	33.31	100	-1.35	33.31	26.81
151	-1.18	33.64	150	-1.20	33.64	27.08

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5693; Aug. 26; latitude 54°04' N.; longitude 55°04' W.; depth 165 m.; dynamic height 1,454.910								Station 5698; Aug. 26; latitude 54°59' N.; longitude 53°24' W.; depth 1,719 m.; dynamic height 1,454.689							
0	7.94	30.75		0	7.94	30.75	23.98	0	6.94	33.27		0	6.94	33.27	26.09
25	-1.34	32.84		25	-1.34	32.84	26.43	25	7.63	33.73		25	7.63	33.73	26.35
50	-1.49	32.89		50	-1.49	32.89	26.47	50	2.09	34.05		50	2.09	34.05	27.22
75	-1.47	33.05		75	-1.47	33.05	26.60	75	1.87	34.29		75	1.87	34.29	27.43
99	-1.42	33.14		100	-1.40	33.14	26.68	100	2.42	34.48		100	2.42	34.48	27.53
149	-1.33	33.50		150	-1.35	33.51	26.98	150	3.58	34.75		150	3.58	34.75	27.65
Station 5694; Aug. 26; latitude 54°10.5' N.; longitude 54°54' W.; depth 178 m.; dynamic height 1,454.891								Station 5699; Aug. 26; latitude 55°02' N.; longitude 53°14' W.; depth 2,103 m.; dynamic height 1,454.646							
0	7.99	30.87		0	7.99	30.87	24.06	0	3.37	34.86		(1,500)	3.35	34.86	27.76
25	-0.29	32.66		25	-0.29	32.66	26.25	1,432	3.37	34.86					
50	-1.42	33.07		50	-1.42	33.07	26.62								
76	-1.40	33.27		75	-1.40	33.27	26.78								
101	-1.39	33.43		100	-1.35	33.43	26.91								
151	-1.09	33.68		150	-1.10	33.68	27.11								
Station 5695; Aug. 26; latitude 54°28' N.; longitude 54°24' W.; depth 220 m.; dynamic height 1,454.911								Station 5700; Aug. 26; latitude 55°14' N.; longitude 52°51' W.; depth 3,113 m.; dynamic height 1,454.639							
0	7.34	30.95		0	7.34	30.95	24.22	0	7.87	33.70		0	7.87	33.70	26.30
25	-0.22	32.57		25	-0.22	32.57	26.18	25	7.48	33.80		25	7.48	33.80	26.42
50	-1.25	32.90		50	-1.25	32.90	26.48	50	3.46	34.12		50	3.46	34.12	27.16
75	-1.37	33.07		75	-1.37	33.07	26.62	74	2.68	34.24		75	2.70	34.24	27.32
100	-1.36	33.24		100	-1.36	33.24	26.76	99	3.83	34.63		100	3.80	34.64	27.54
151	-1.29	33.51		150	-1.30	33.51	26.98	149	3.40	34.73		150	3.40	34.73	27.65
201	-1.06	33.67		200	-1.05	33.67	27.10	198	3.21	34.75		200	3.20	34.75	27.69
Station 5696; Aug. 26; latitude 54°46' N.; longitude 53°51' W.; depth 329 m.; dynamic height 1,454.843								297	3.18	34.82		300	3.20	34.82	27.79
0	6.42	31.50		0	6.42	31.50	24.77	378	3.23	34.84		400	3.25	34.84	27.75
25	3.46	32.87		25	3.46	32.87	26.17	563	3.37	34.87		600	3.35	34.87	27.77
50	-0.30	33.19		50	-0.30	33.19	26.68	745	3.37	34.89		800	3.35	34.89	27.78
75	-0.59	33.46		75	-0.59	33.46	26.91	924	3.39	34.89		1,000	3.40	34.89	27.78
100	-0.41	33.62		100	-0.41	33.62	27.04	1,413	3.31	34.90		1,500	3.30	34.90	27.80
150	0.27	34.00		150	0.27	34.00	27.30	1,920	3.05	34.92		(2,000)	2.95	34.92	27.85
201	0.87	34.19		200	0.90	34.19	27.42								
301	2.15	34.41		300	2.15	34.41	27.51								
Station 5697; Aug. 26; latitude 54°52' N.; longitude 53°38' W.; depth 657 m.; dynamic height 1,454.754								Station 5701; Aug. 26; latitude 55°14' N.; longitude 52°51' W.; depth 3,113 m.; dynamic height 1,454.639							
0	4.80	32.80		0	4.80	32.80	25.98	0	8.09	33.70		0	8.09	33.70	26.26
24	1.30	33.39		25	1.15	33.40	26.77	25	7.74	33.69		25	7.74	33.69	26.30
48	-0.33	33.66		50	-0.30	33.67	27.07	50	2.35	34.22		50	2.35	34.22	27.34
71	0.11	33.86		75	0.20	33.89	27.22	75	2.90	34.56		75	2.90	34.56	27.57
95	0.68	34.06		100	0.80	34.10	27.35	101	3.25	34.68		100	3.25	34.68	27.62
143	1.82	34.35		150	1.95	34.38	27.50	151	3.56	34.78		150	3.55	34.78	27.67
190	2.53	34.49		200	2.65	34.51	27.55	201	3.55	34.82		200	3.55	34.82	27.71
285	3.34	34.66		300	3.45	34.67	27.60	302	3.42	34.83		300	3.45	34.83	27.72
372	3.70	34.72		400	3.75	34.74	27.62	381	3.40	34.85		400	3.40	34.85	27.75
574	3.79	34.83		(600)	3.80	34.84	27.70	575	3.14	34.84		600	3.15	34.84	27.76
								771	3.16	34.84		800	3.20	34.86	27.78
								971	3.20	34.86		1,000	3.20	34.86	27.78
								1,480	3.14	34.86		1,500	3.15	34.86	27.78
								2,006	3.27	34.925		2,000	3.30	34.92	27.82
								2,536	2.76	34.93		2,500	2.80	34.93	27.86
								2,981	1.79	34.89		3,000	1.75	34.88	27.91

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰	σ_t	Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity ‰	σ_t
Station 5701; Aug. 26-27; latitude 55°31.5' N., longitude 52°25' W.; depth 3,182 m.; dynamic height 1,454.644								Station 5704; Aug. 27; latitude 57°05.5' N., longitude 49°34' W.; depth 3,566 m.; dynamic height 1,454.623							
0	9.85	33.97		0	9.85	33.97	26.20	0	10.14	34.46		0	10.14	34.46	26.52
25	9.26	34.40		25	9.26	34.40	26.63	24	10.01	34.48		25	9.85	34.49	26.60
50	4.64	34.67		50	4.64	34.67	27.48	47	4.06	34.64		50	3.95	34.65	27.53
75	4.07	34.66		75	4.07	34.66	27.53	71	3.59	34.68		75	3.55	34.69	27.60
101	3.90	34.72		100	3.90	34.72	27.60	95	3.47	34.74		100	3.45	34.75	27.66
151	3.68	34.74		150	3.70	34.74	27.63	142	3.36	34.78		150	3.35	34.78	27.69
201	3.58	34.80		200	3.60	34.80	27.69	189	3.23	34.80		200	3.25	34.80	27.72
302	3.24	34.80		300	3.25	34.80	27.72	284	3.18	34.81		300	3.20	34.81	27.74
385	3.21	34.82		400	3.20	34.82	27.75	376	3.19	34.80		400	3.20	34.81	27.74
585	3.22	34.835		600	3.20	34.83	27.75	563	3.15	34.84		600	3.20	34.84	27.76
789	3.23	34.84		800	3.25	34.84	27.75	749	3.24	34.86		800	3.25	34.86	27.77
999	3.23	34.85		1,000	3.25	34.85	27.76	936	3.26	34.88		1,000	3.25	34.88	27.78
1,520	3.20	34.87		1,500	3.20	34.87	27.79	1,429	3.20	34.86		1,500	3.20	34.86	27.78
2,037	3.36	34.91		2,000	3.35	34.91	27.80	1,936	3.23	34.84		2,000	3.25	34.87	27.78
2,535	2.99	34.915		2,500	3.05	34.91	27.83	2,488	3.24	34.925		2,500	3.25	34.92	27.82
3,022	2.30	34.87		3,000	2.35	34.87	27.86	2,989	2.81	34.92		3,000	2.80	34.92	27.86
								3,462	2.02	34.90		(3,500)	1.95	34.90	27.92
Station 5702; Aug. 27; latitude 55°56' N., longitude 51°48' W.; depth 3,457 m.; dynamic height 1,454.623								Station 5705; Aug. 28; latitude 57°38' N., longitude 48°28' W.; depth 3,475 m.; dynamic height 1,454.601							
0	10.46	34.40		0	10.46	34.40	26.42	0	9.72	34.44		0	9.72	34.44	26.58
25	9.42	34.44		25	9.42	34.44	26.63	27	6.38	34.59		25	6.70	34.59	27.15
50	4.63	34.68		50	4.63	34.68	27.48	53	3.63	34.69		50	3.70	34.68	27.58
75	4.23	34.69		75	4.23	34.69	27.53	80	3.45	34.75		75	3.45	34.74	27.65
100	3.89	34.74		100	3.89	34.74	27.61	106	3.44	34.77		100	3.45	34.77	27.68
150	3.59	34.78		150	3.59	34.78	27.67	160	3.30	34.80		150	3.30	34.80	27.72
201	3.36	34.80		200	3.35	34.80	27.71	214	3.30	34.80		200	3.30	34.80	27.72
301	3.28	34.82		300	3.30	34.82	27.74	320	3.21	34.83		300	3.25	34.82	27.74
385	3.32	34.84		400	3.30	34.84	27.75	359	3.23	34.84		400	3.25	34.84	27.75
583	3.30	34.86		600	3.30	34.86	27.77	581	3.14	34.84		600	3.15	34.84	27.76
786	3.24	34.86		800	3.25	34.86	27.77	771	3.21	34.86		800	3.20	34.86	27.78
993	3.24	34.87		1,000	3.25	34.87	27.78	960	3.23	34.87		1,000	3.25	34.87	27.78
1,502	3.17	34.865		1,500	3.20	34.87	27.79	1,461	3.16	34.86		1,500	3.20	34.86	27.78
2,018	3.31	34.91		2,000	3.30	34.91	27.81	1,975	3.26	34.915		2,000	3.25	34.92	27.82
2,521	3.19	34.915		2,500	3.20	34.91	27.82	2,560	3.03	34.93		2,500	3.10	34.93	27.84
3,018	2.69	34.92		3,000	2.75	34.92	27.87	3,062	2.57	34.93		3,000	2.65	34.93	27.88
3,367	1.89	34.90						3,450	1.45	34.88					
Station 5703; Aug. 27; latitude 56°33.5' N., longitude 50°38' W.; depth 3,585 m.; dynamic height 1,454.623								Station 5706; Aug. 28; latitude 58°09.5' N., longitude 47°13' W.; depth 3,200 m.; dynamic height 1,454.604							
0	9.93	34.44		0	9.93	34.44	26.54	0	9.95	34.37		0	9.95	34.37	26.49
25	8.78	34.56		25	8.78	34.56	26.83	25	5.44	34.58		25	5.44	34.58	27.31
50	4.65	34.66		50	4.65	34.66	27.47	50	3.94	34.74		50	3.94	34.74	27.60
75	3.87	34.75		75	3.87	34.75	27.62	75	3.80	34.79		75	3.80	34.79	27.66
99	3.57	34.76		100	3.60	34.76	27.66	100	3.79	34.81		100	3.79	34.81	27.68
149	3.27	34.79		150	3.25	34.79	27.71	150	3.76	34.85		150	3.76	34.85	27.71
199	3.18	34.80		200	3.20	34.80	27.73	201	3.69	34.85		200	3.70	34.85	27.72
298	3.21	34.82		300	3.25	34.82	27.74	301	3.64	34.88		300	3.65	34.88	27.74
387	3.23	34.84		400	3.25	34.84	27.75	411	3.47	34.86		400	3.50	34.86	27.75
580	3.15	34.84		600	3.15	34.84	27.76	613	3.46	34.87		600	3.45	34.87	27.76
771	3.24	34.85		800	3.25	34.85	27.76	814	3.33	34.87		800	3.35	34.87	27.77
962	3.23	34.86		1,000	3.25	34.86	27.77	1,012	3.29	34.88		1,000	3.30	34.88	27.78
1,460	3.24	34.85		1,500	3.25	34.86	27.77	1,525	3.22	34.88		1,500	3.25	34.88	27.78
1,967	3.20	34.865		2,000	3.20	34.87	27.79	2,041	3.24	34.91		2,000	3.25	34.91	27.81
2,426	34.91	2,500		2,500	3.15	34.91	27.82	2,515	2.80	34.92		2,500	2.85	34.92	27.86
2,908	2.96	34.91		3,000	2.90	34.91	27.85	3,000	1.96	34.90		3,000	1.95	34.90	27.92
3,392	2.28	34.90		(3,500)	2.00	34.90	27.91	3,168	1.52	34.89					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5707; Aug. 28; latitude 58°40.5' N., longitude 46°16' W.; depth 2,562 m.; dynamic height 1,454.620							Station 5710; Aug. 29; latitude 59°23' N., longitude 44°54' W.; depth 1,271 m.; dynamic height 1,454.749						
0	9.65	34.46	0	9.65	34.46	26.61	0	7.15	34.78	0	7.15	34.78	27.24
25	7.23	34.78	25	7.23	34.78	27.23	24	7.14	34.77	25	7.15	34.77	27.24
50	5.20	34.85	50	5.20	34.85	27.55	47	7.15	34.77	50	7.15	34.78	27.24
75	5.31	34.96	75	5.31	34.96	27.63	71	7.27	34.82	75	7.25	34.82	27.27
101	5.11	34.96	100	5.15	34.96	27.65	95	7.04	34.80	100	6.90	34.79	27.29
151	4.77	34.94	150	4.80	34.94	27.67	142	5.65	34.72	150	5.60	34.73	27.41
201	4.26	34.89	200	4.30	34.89	27.68	189	5.41	34.83	200	5.35	34.85	27.54
302	4.05	34.89	300	4.05	34.89	27.71	284	4.95	34.89	300	4.95	34.90	27.62
400	3.85	34.90	400	3.85	34.90	27.74	288	5.01	34.91	400	4.85	34.90	27.63
598	3.53	34.88	600	3.55	34.88	27.75	441	4.82	34.91	600	4.75	34.93	27.66
794	3.57	34.90	800	3.60	34.90	27.77	600	4.74	34.93	800	4.50	34.93	27.69
988	3.45	34.88	1,000	3.40	34.88	27.77	787	4.48	34.93	(1,000)	4.00	34.93	27.75
1,491	3.35	34.91	1,500	3.35	34.91	27.80	Station 5711; Aug. 29; latitude 59°30' N., longitude 44°16' W.; depth 196 m.; dynamic height 1,454.868						
2,002	2.93	34.925	2,000	2.95	34.92	27.85	0	2.02	32.95	0	2.02	32.95	26.36
2,453	2.14	34.89	(2,500)	2.00	34.89	27.90	26	2.34	33.09	25	2.35	33.09	26.43
Station 5708; Aug. 29; latitude 59°03.5' N., longitude 45°29' W.; depth 2,378 m.; dynamic height 1,454.633							52	2.53	33.61	50	2.50	33.56	26.80
0	8.92	34.64	0	8.92	34.64	26.86	78	4.76	34.15	75	4.60	34.11	27.04
25	8.54	34.74	25	8.54	34.74	27.00	105	5.00	34.28	100	4.95	34.26	27.12
50	6.03	34.99	50	6.03	34.99	27.56	156	5.30	34.52	150	5.25	34.50	27.27
75	5.70	35.00	75	5.70	35.00	27.61	Station 5712; Aug. 29; latitude 59°32' N., longitude 44°07' W.; depth 170 m.; dynamic height 1,454.843						
100	5.40	34.99	100	5.40	34.99	27.64	0	1.64	33.48	0	1.64	33.48	26.80
150	4.61	34.90	150	4.61	34.90	27.66	25	2.75	33.76	25	2.75	33.86	26.94
200	4.48	34.91	200	4.48	34.91	27.68	50	3.21	33.91	50	3.21	33.91	27.02
300	4.00	34.89	300	4.00	34.89	27.72	76	4.74	34.18	75	4.70	34.17	27.08
383	4.08	34.91	400	4.05	34.91	27.73	101	4.74	34.21	100	4.75	34.21	27.10
572	3.62	34.88	600	3.60	34.88	27.75	150	3.98	34.40	150	4.00	34.40	27.33
758	3.60	34.87	800	3.60	34.88	27.75	Station 5713; Aug. 29; latitude 59°40' N., longitude 43°54' W.; depth 151 m.; dynamic height 1,454.885						
944	3.48	34.88	1,000	3.50	34.88	27.76	0	1.92	32.93	0	1.92	32.93	26.35
1,432	3.40	34.91	1,500	3.40	34.91	27.80	24	1.56	33.08	25	1.55	33.09	26.49
1,930	3.00	34.93	2,000	2.95	34.92	27.85	47	1.18	33.14	50	1.10	33.14	26.57
2,298	2.29	34.88	Station 5709; Aug. 29; latitude 59°16' N., longitude 45°05' W.; depth 2,030 m.; dynamic height 1,454.687										
0	8.05	34.85	0	8.05	34.85	27.17	71	0.87	33.15	75	0.90	33.18	26.61
25	8.11	34.86	25	8.11	34.86	27.17	94	1.24	33.59	100	1.40	33.68	26.98
50	7.80	34.91	50	7.80	34.91	27.25	124	2.24	34.02	(150)	3.15	34.31	27.34
75	6.46	34.965	75	6.46	34.965	27.48	Station 5714; Aug. 29; latitude 59°42' N., longitude 43°44' W.; depth 153 m.; dynamic height 1,454.926						
99	5.74	34.95	100	5.75	34.95	27.57	0	1.90	32.67	0	1.90	32.67	26.14
149	5.48	34.94	150	5.50	34.94	27.59	23	1.81	32.70	25	1.80	32.70	26.16
199	5.34	34.94	200	5.55	34.94	27.60	46	1.71	32.72	50	1.65	32.75	26.22
298	5.03	34.95	300	5.00	34.95	27.66	69	1.28	32.91	75	1.15	32.98	26.44
364	4.73	34.92	400	4.70	34.92	27.67	93	0.78	33.20	100	0.90	33.28	26.69
541	4.59	34.945	600	4.55	34.94	27.70	138	2.12	33.75	(150)	2.50	33.86	27.04
781	4.16	34.93	800	4.10	34.93	27.75							
883	3.81	34.91	1,000	3.70	34.91	27.77							
1,343	3.49	34.90	1,500	3.40	34.90	27.79							
1,792	2.92	34.915	(2,000)	2.25	34.91	27.90							

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Sealed values				Observed values				Sealed values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5715; Aug. 29; latitude 59°44' N., longitude 43°12' W.; depth 174 m.; dynamic height 1,454.849								Station 5719; Aug. 30; latitude 59°45' N., longitude 42°05' W.; depth 1,737 m.; dynamic height 1,454.665							
0	2.15	33.32		0	2.15	33.32	26.64	0	8.70	34.84		0	8.70	34.84	27.06
26	0.07	33.34		25	0.15	33.34	26.78	26	8.59	34.84		25	8.60	34.84	27.07
52	2.22	33.72		50	2.10	33.70	26.94	53	7.19	35.03		50	7.25	35.03	27.42
79	4.33	34.18		75	4.20	34.12	27.09	79	6.88	35.03		75	6.95	35.03	27.47
104	4.54	34.29		100	4.55	34.28	27.17	106	6.62	35.055		100	6.70	35.05	27.52
157	3.89	34.32		150	4.00	34.32	27.27	157	6.19	35.03		150	6.25	35.04	27.57
Station 5716; Aug. 29; latitude 59°44.5' N., longitude 42°53' W.; depth 172 m.; dynamic height 1,454.822								210	5.67	35.00		200	5.75	35.00	27.60
0	3.16	33.98		0	3.16	33.98	27.07	316	5.34	34.99		300	5.40	34.99	27.64
28	3.41	34.04		25	3.35	34.02	27.09	368	5.11	34.96		400	5.00	34.96	27.67
54	4.01	34.19		50	3.90	34.18	27.16	561	4.55	34.95		600	4.45	34.95	27.72
82	4.18	34.23		75	4.15	34.23	27.18	762	3.96	34.93		800	3.85	34.92	27.76
109	3.10	34.21		100	3.50	34.21	27.23	963	3.55	34.905		1,000	3.55	34.90	27.77
164	3.57	34.43		150	3.45	34.37	27.36	1,482	3.15	34.92		1,500	3.20	34.92	27.83
Station 5717; Aug. 29; latitude 59°45.5' N., longitude 42°30' W.; depth 340 m.; dynamic height 1,454.799								Station 5720; Aug. 30; latitude 59°44' N., longitude 41°36' W.; depth 1,975 m.; dynamic height 1,454.664							
0	8.00	34.83		0	8.00	34.83	27.16	0	9.53	34.71		0	9.53	34.71	26.82
26	7.96	34.83		25	7.95	34.83	27.16	24	8.68	34.84		25	8.65	34.84	27.07
53	7.96	34.83		50	7.95	34.83	27.16	48	7.12	35.04		50	7.05	35.04	27.46
79	7.83	34.82		75	7.90	34.82	27.17	73	6.41	34.99		75	6.40	34.99	27.51
105	5.44	34.80		100	5.70	34.80	27.45	97	6.42	35.03		100	6.40	35.02	27.54
157	5.32	34.90		150	5.35	34.89	27.56	144	5.52	34.94		150	5.45	34.93	27.58
209	4.88	34.85		200	4.95	34.85	27.58	193	4.87	34.88		200	4.85	34.88	27.61
314	4.92	34.89		300	4.95	34.88	27.60	290	4.82	34.92		300	4.80	34.92	27.66
Station 5718; Aug. 30; latitude 59°45' N., longitude 42°24' W.; depth 1,124 m.; dynamic height 1,454.783								370	4.71	34.94		400	4.65	34.94	27.69
0	8.09	34.86		0	8.09	34.86	27.17	558	4.04	34.92		600	3.95	34.91	27.74
26	8.09	34.87		25	8.10	34.87	27.18	751	3.72	34.88		800	3.70	34.88	27.74
53	8.01	34.86		50	8.05	34.86	27.18	945	3.60	34.89		1,000	3.60	34.89	27.76
79	5.73	34.76		75	6.10	34.77	27.38	1,470	3.28	34.92		1,500	3.25	34.92	27.82
106	4.77	34.76		100	4.85	34.76	27.52	1,839	2.64	34.905					
158	5.62	34.93		150	5.55	34.92	27.57	Station 5721; Aug. 30; latitude 59°47' N., longitude 40°48' W.; depth 2,213 m.; dynamic height 1,454.606							
211	5.26	34.89		200	5.30	34.89	27.57	0	9.65	34.73		0	9.65	34.73	26.82
317	5.14	34.92		300	5.15	34.92	27.62	27	6.50	34.99		25	6.65	34.97	27.47
418	4.99	34.92		400	5.00	34.92	27.64	53	6.13	35.03		50	6.15	35.03	27.57
617	4.74	34.92		600	4.75	34.92	27.66	81	5.75	35.01		75	5.85	35.02	27.61
810	4.77	34.93		800	4.80	34.93	27.66	107	5.45	34.99		100	5.50	35.00	27.63
1,026	4.71	34.935		1,000	4.75	34.93	27.66	161	4.73	34.945		150	4.85	34.95	27.67
								215	4.36	34.935		200	4.45	34.94	27.71
								322	4.10	34.925		300	4.15	34.93	27.73
								428	3.67	34.89		400	3.75	34.90	27.75
								637	3.58	34.885		600	3.60	34.88	27.75
								843	3.63	34.87		800	3.55	34.87	27.75
								1,047	3.39	34.89		1,000	3.45	34.89	27.77
								1,572	3.34	34.94		1,500	3.35	34.94	27.82
								2,097	2.82	34.94		2,000	3.05	34.94	27.85

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5722; Aug. 30; latitude 59°53.5' N., longitude 39°46' W.; depth 2,743 m.; dynamic height 1,454.618								Station 5725; Aug. 31; latitude 59°59' N., longitude 35°49' W.; depth 3,033 m.; dynamic height 1,454.644							
0	10.11	34.70		0	10.11	34.70	26.72	0	10.36	34.73		0	10.36	34.73	26.70
24	9.22	34.76		25	9.10	34.76	26.93	24	10.22	34.74		25	10.10	34.74	26.75
48	5.00	34.85		50	4.95	34.85	27.58	48	6.33	34.88		50	6.15	34.89	27.46
72	4.65	34.865		75	4.60	34.87	27.64	73	5.57	34.92		75	5.55	34.92	27.57
96	4.49	34.89		100	4.45	34.89	27.67	97	5.55	34.93		100	5.55	34.93	27.57
144	4.27	34.89		150	4.25	34.89	27.69	145	5.12	34.91		150	5.05	34.91	27.62
193	4.15	34.89		200	4.15	34.89	27.70	193	4.69	34.90		200	4.65	34.90	27.66
289	3.91	34.905		300	3.85	34.91	27.75	290	4.31	34.91		300	4.25	34.91	27.71
363	3.60	34.88		400	3.55	34.88	27.75	386	3.94	34.89		400	3.90	34.89	27.73
544	3.49	34.88		600	3.50	34.88	27.76	578	3.54	34.86		600	3.55	34.86	27.74
722	3.44	34.89		800	3.50	34.89	27.77	768	3.54	34.89		800	3.55	34.89	27.76
901	3.44			1,000	3.45	34.88	27.77	958	3.49	34.90		1,000	3.50	34.90	27.78
1,377	3.34	34.88		1,500	3.35	34.89	27.78	1,450	3.39	34.905		1,500	3.40	34.91	27.80
1,870	3.35	34.93		2,000	3.35	34.93	27.81	1,952	3.40	34.935		2,000	3.40	34.93	27.81
2,481	2.25	34.89		(2,500)	2.15	34.89	27.89	2,466	3.07	34.925		2,500	3.00	34.92	27.85
								2,907	2.28	34.91		(3,000)	2.05	34.91	27.92
Station 5723; Aug. 30; latitude 59°53' N., longitude 38°49' W.; depth 2,871 m.; dynamic height 1,454.620								Station 5726; Aug. 31; latitude 59°17' N., longitude 36°40' W.; depth 2,944 m.; dynamic height 1,454.640							
0	10.22	34.64		0	10.22	34.64	26.65	0	10.47	34.74		0	10.47	34.74	26.68
25	9.91	34.66		25	9.91	34.66	26.72	25	10.12	34.78		35	10.12	34.78	26.78
51	5.33	34.87		50	5.60	34.87	27.52	51	5.96	34.84		50	6.05	34.83	27.43
76	4.79	34.88		75	4.80	34.88	27.62	76	5.26	34.87		75	5.25	34.87	27.57
101	4.50	34.90		100	4.50	34.90	27.67	102	4.81	34.87		100	4.85	34.87	27.61
152	4.10	34.90		150	4.10	34.90	27.72	152	4.51	34.89		150	4.55	34.89	27.66
203	4.05	34.89		200	4.05	34.89	27.71	203	4.27	34.90		200	4.30	34.90	27.69
304	3.72	34.88		300	3.75	34.88	27.73	305	4.02	34.89		300	4.05	34.89	27.71
396	3.58	34.88		400	3.55	34.88	27.75	400	3.64	34.87		400	3.65	34.87	27.74
592	3.50	34.88		600	3.50	34.88	27.76	597	3.47	34.87		600	3.50	34.87	27.76
787	3.51	34.89		800	3.50	34.89	27.77	792	3.49	34.89		800	3.50	34.89	27.77
981	3.46	34.90		1,000	3.45	34.90	27.78	985	3.45	34.88		1,000	3.45	34.89	27.77
1,485	3.35	34.90		1,500	3.35	34.90	27.79	1,490	3.35	34.88		1,500	3.35	34.88	27.77
1,999	3.34	34.94		2,000	3.35	34.94	27.82	2,001	3.41	34.94		2,000	3.40	34.94	27.82
2,518	2.83	34.94		2,500	2.85	34.94	27.87	2,476	3.10	34.94		2,500	3.10	34.94	27.85
2,810	1.50	34.89						2,877	2.51	34.90		(3,000)	2.30	34.89	27.88
Station 5724; Aug. 31; latitude 59°58.5' N., longitude 37°19' W.; depth 3,054 m.; dynamic height 1,454.629								Station 5727; Sept. 1; latitude 58°31.5' N., longitude 37°25' W.; depth 3,169 m.; dynamic height 1,454.697							
0	9.48	34.72		0	9.48	34.72	26.85	0	10.30	34.68		0	10.30	34.68	26.67
23	8.29	31.78		25	7.85	34.78	27.14	25	10.16	34.68		25	10.16	34.68	26.69
47	5.34	34.89		50	5.35	34.90	27.57	50	6.39	34.91		50	6.39	34.91	27.45
70	5.28	34.92		75	5.25	34.92	27.61	76	5.99	34.92		75	6.00	34.92	27.51
94	5.05	34.92		100	5.00	34.92	27.64	101	6.02	34.96		100	6.05	34.96	27.54
141	4.71	34.935		150	4.65	34.93	27.68	151	5.83	34.95		150	5.85	34.95	27.55
187	4.57	34.93		200	4.55	34.93	27.69	202	5.64	34.95		200	5.65	34.95	27.58
281	4.32	34.92		300	4.25	34.92	27.72	303	4.94	34.92		300	4.95	34.92	27.64
396	4.00	34.90		400	4.00	34.90	27.73	381	4.70	34.91		400	4.60	34.91	27.67
591	3.63	34.88		600	3.60	34.88	27.75	571	3.87	34.89		600	3.80	34.88	27.73
785	3.54	34.88		800	3.55	34.88	27.75	759	3.53	34.85		800	3.55	34.85	27.73
976	3.49	34.885		1,000	3.50	34.89	27.77	948	3.52	34.87		1,000	3.50	34.88	27.76
1,472	3.40	34.89		1,500	3.40	34.89	27.78	1,442	3.42	34.90		1,500	3.45	34.91	27.79
1,972	3.49	34.935		2,000	3.50	34.94	27.81	1,947	3.51	34.95		2,000	3.50	34.95	27.82
2,323	3.32	34.95		2,500	3.15	34.94	27.84	2,480	3.17	34.95		2,500	3.15	34.95	27.85
2,813	2.89	34.92		(3,000)	2.75	34.91	27.86	2,950	2.84	34.95		(3,600)	2.80	34.95	27.88

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5728; Sept. 1; latitude 57°45' N., longitude 38°04' W.; depth 3,219 m.; dynamic height 1,454.668								Station 5731; Sept. 2; latitude 57°04' N., longitude 40°34' W.; depth 3,290 m.; dynamic height 1,454.659							
0	10.43	34.72		0	10.43	34.72	26.68	0	10.79	34.63		0	10.79	34.63	26.54
25	10.36	34.72		25	10.36	34.72	26.69	25	10.79	34.63		25	10.79	34.63	26.54
50	6.34	34.79		50	6.34	34.79	27.36	49	5.87	34.77		50	5.85	34.77	27.41
76	5.54	34.86		75	5.55	34.86	27.52	74	4.94	34.77		75	4.95	34.77	27.52
101	5.44	34.88		100	5.45	34.88	27.54	98	4.83	34.82		100	4.70	34.82	27.50
151	5.12	34.90		150	5.15	34.90	27.60	148	4.31	34.80		150	4.30	34.80	27.62
202	4.91	34.91		200	4.95	34.91	27.63	197	4.28	34.83		200	4.30	34.83	27.64
303	4.58	34.91		300	4.60	34.91	27.67	295	3.82	34.83		300	3.90	34.85	27.70
403	4.19	34.90		400	4.20	34.90	27.71	324	3.90	34.875		400	3.65	34.86	27.73
602	3.62	34.88		600	3.65	34.88	27.74	494	3.50	34.86		600	3.35	34.85	27.75
797	3.54	34.88		800	3.55	34.88	27.75	668	3.27	34.84		800	3.40	34.86	27.76
992	3.61	34.90		1,000	3.60	34.90	27.77	849	3.44	34.87		1,000	3.45	34.88	27.76
1,502	3.35	34.90		1,500	3.35	34.90	27.79	1,325	3.41	34.90		1,500	3.45	34.91	27.79
2,021	3.36	34.945		2,000	3.35	34.94	27.82	1,835	3.45	34.93		2,000	3.35	34.93	27.81
2,526	3.11	34.95		2,500	3.10	34.95	27.86	2,580	3.08	34.925		2,500	3.10	34.93	27.84
3,027	2.81	34.93		3,000	2.85	34.93	27.86	3,085	2.77	34.94		3,000	2.85	34.94	27.86
3,178	2.64	34.91						3,290	2.51	34.91					
Station 5729; Sept. 1; latitude 57°02.5' N., longitude 39°04' W.; depth 3,200 m.; dynamic height 1,454.670								Station 5732; Sept. 2; latitude 57°36.5' N., longitude 41°08' W.; depth 3,292 m.; dynamic height 1,454.626							
0	11.04	34.65		0	11.04	34.65	26.51	0	10.20	34.60		0	10.20	34.60	26.62
26	10.90	34.66		25	10.90	34.60	26.50	26	10.10	34.60		25	10.15	34.60	26.63
52	5.97	34.81		50	6.15	34.81	27.41	52	4.85	34.76		50	5.15	34.76	27.49
78	5.39	34.83		75	5.40	34.83	27.51	78	4.04	34.78		75	4.10	34.78	27.62
103	5.35	34.84		100	5.35	34.84	27.53	105	3.78	34.79		100	3.80	34.79	27.66
154	5.13	34.885		150	5.15	34.85	27.56	156	3.74	34.84		150	3.75	34.83	27.69
206	4.93	34.88		200	5.00	34.88	27.60	208	3.66	34.85		200	3.70	34.85	27.72
309	3.89	34.83		300	3.90	34.83	27.68	313	3.27	34.83		300	3.30	34.83	27.74
414	3.79	34.86		400	3.80	34.86	27.72	343	3.27	34.835		400	3.25	34.84	27.75
620	3.40	34.85		600	3.40	34.85	27.75	519	3.27	34.84		600	3.30	34.85	27.76
826	3.42	34.87		800	3.40	34.87	27.77	698	3.36	34.87		800	3.35	34.88	27.77
1,041	3.44	34.89		1,000	3.45	34.89	27.77	881	3.35	34.875		1,000	3.35	34.88	27.77
1,505	3.36	34.89		1,500	3.40	34.89	27.78	1,371	3.27	34.87		1,500	3.30	34.88	27.78
2,033	3.38	34.92		2,000	3.40	34.92	27.81	1,891	3.43	34.90		2,000	3.40	34.91	27.80
2,529	3.05	34.93		2,500	3.10	34.93	27.84	2,644	2.98	34.94		2,500	3.05	34.93	27.84
3,027	2.81	34.94		3,000	2.85	34.94	27.87	3,045	2.64	34.925		3,000	2.70	34.93	27.87
3,149	2.68	34.93						3,245	1.99	34.90					
Station 5730; Sept. 2; latitude 56°24' N., longitude 40°01' W.; depth 2,671 m.; dynamic height 1,454.662								Station 5733; Sept. 2-3; latitude 58°10' N., longitude 41°49' W.; depth 3,017 m.; dynamic height 1,454.609							
0	11.41	34.61		0	11.41	34.61	26.42	0	8.57	34.62		0	8.57	34.62	26.91
25	11.04	34.62		25	11.04	34.62	26.49	24	8.58	34.64		25	8.55	34.64	26.92
50	5.85	34.82		50	5.85	34.82	27.45	47	4.48	34.74		50	4.30	34.74	27.57
75	5.44	34.86		75	5.44	34.86	27.53	71	3.80	34.75		75	3.70	34.75	27.64
100	5.34	34.86		100	5.34	34.86	27.54	94	3.48	34.775		100	3.45	34.77	27.68
150	4.64	34.84		150	4.64	34.84	27.61	141	3.29	34.76		150	3.30	34.77	27.70
200	4.36	34.85		200	4.36	34.85	27.65	188	3.30	34.81		200	3.30	34.81	27.73
300	3.98	34.87		300	3.98	34.87	27.71	282	3.29	34.82		300	3.30	34.82	27.74
388	3.74	34.86		400	3.75	34.86	27.72	358	3.40	34.85		400	3.40	34.86	27.76
580	3.65	34.88		600	3.65	34.88	27.74	558	3.39	34.86		600	3.40	34.86	27.76
772	3.57	34.89		800	3.60	34.89	27.76	758	3.30	34.855		800	3.30	34.86	27.77
976	3.49	34.89		1,000	3.50	34.89	27.77	1,458	3.25	34.87		1,000	3.30	34.86	27.77
1,490	3.46	34.925		1,500	3.50	34.93	27.80	1,957	3.39	34.93		1,500	3.25	34.87	27.78
1,882	3.37	34.96		2,000	3.30	34.96	27.85	2,370	3.15	34.93		2,000	3.40	34.93	27.81
2,374	3.04	34.94		(2,500)	2.90	34.93	27.86	2,720	2.70	34.90		2,500	3.05	34.92	27.84
												(3,000)	1.95	34.87	27.90

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1954—Continued

Observed values			Scaled values				σ_t	Observed values			Scaled values				σ_t								
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters		Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰											
Station 5734; Sept. 3; latitude 58°42' N., longitude 42°23' W.; depth 2,506 m.; dynamic height 1,454.600												Station 5737; Sept. 4; latitude 59°22' N., longitude 43°40' W.; depth 666 m.; dynamic height 1,454.804											
0	8.52	34.73	0	8.52	34.73	27.00		0	2.20	33.18	0	2.20	33.18	26.52									
23	7.58	34.88	25	7.30	34.90	27.32		26	4.37	34.01	25	4.30	34.00	26.98									
46	6.06	35.04	50	6.00	35.04	27.60		52	7.35	34.69	50	7.35	34.68	27.13									
69	5.84	35.02	75	5.80	35.02	27.62		79	6.12	34.51	75	6.25	34.52	27.16									
92	5.61	35.01	100	5.55	35.01	27.64		105	7.21	34.80	100	7.10	34.74	27.22									
138	5.32	35.00	150	5.25	35.00	27.67		156	6.53	35.01	150	6.65	35.00	27.49									
184	5.13	35.00	200	5.05	34.99	27.68		209	5.37	34.91	200	5.55	34.92	27.57									
276	4.18	34.915	300	4.25	34.92	27.72		314	4.90		300	4.90	34.90	27.63									
325	4.29	34.92	400	3.75	34.88	27.73		399	4.87	34.90	400	4.90	34.90	27.63									
494	3.49	34.87	600	3.45	34.88	27.76		607	4.75	34.92	600	4.75	34.92	27.66									
667	3.44	34.89	800	3.40	34.89	27.78																	
845	3.38	34.895	1,000	3.40	34.90	27.79																	
1,343	3.38	34.92	1,500	3.35	34.93	27.81																	
1,892	3.16	34.94	2,000	3.05	34.93	27.84																	
2,252	2.43	34.885	(2,500)	1.75	34.86	27.90																	
Station 5735; Sept. 4; latitude 58°54.5' N., longitude 42°58' W.; depth 2,012 m.; dynamic height 1,454.629																							
0	7.71	34.88	0	7.71	34.88	27.24		0	2.48	32.82	0	2.48	32.82	26.21									
27	7.72	34.88	25	7.70	34.88	27.24		25	2.43	33.45	25	2.43	33.45	26.72									
53	7.69	34.90	50	7.70	34.89	27.25		50	3.12	33.67	50	3.12	33.67	26.84									
79	6.17	35.04	75	6.30	35.03	27.55		75	3.54	33.84	75	3.54	33.84	26.92									
105	6.05	35.02	100	6.10	35.03	27.58		100	4.69	34.21	100	4.69	34.21	27.11									
159	5.60	34.98	150	5.70	34.98	27.59		149	3.86	34.54	150	3.90	34.54	27.45									
211	5.27	34.96	200	5.35	34.96	27.62		199	4.34	34.69	200	4.40	34.69	27.51									
316	4.70	34.95	300	4.80	34.95	27.68		274	5.13	34.89													
378	4.50	34.94	400	4.45	34.94	27.71																	
566	3.98	34.92	600	3.90	34.92	27.76																	
754	3.64	34.90	800	3.60	34.90	27.77																	
940	3.46	34.89	1,000	3.45	34.89	27.77																	
1,428	3.13	34.94	1,500	3.10	34.93	27.84																	
1,926	1.96	34.89	2,000	1.60	34.88	27.92																	
Station 5736; Sept. 4; latitude 59°04.5' N., longitude 43°19' W.; depth 1,646 m.; dynamic height 1,451.680																							
0	8.35	34.85	0	8.35	34.85	27.12		0	2.32	32.50	0	2.32	32.50	25.97									
24	8.18	34.87	25	8.20	34.87	27.16		25	2.01	33.17	25	2.01	33.17	26.53									
48	8.12	34.88	50	8.10	34.88	27.18		50	2.45	33.69	50	2.45	33.69	26.90									
72	7.88	34.92	75	7.80	34.93	27.26		75	3.34	33.84	75	3.34	33.84	26.94									
96	6.87	35.03	100	6.80	35.03	27.49		100	4.11	34.09	100	4.11	34.09	27.07									
144	6.17	35.02	150	6.10	35.02	27.58		149	5.39	34.50	150	5.40	34.51	27.26									
191	5.78	35.01	200	5.70	35.01	27.62		199	5.39	34.74	200	5.40	34.74	27.44									
287	5.11	34.97	300	5.00	34.96	27.67																	
349	4.78	34.94	400	4.70	34.94	27.68																	
526	4.50	34.94	600	4.40	34.94	27.71																	
703	4.17	34.93	800	4.00	34.93	27.75																	
886	3.85	34.93	1,000	3.75	34.92	27.77																	
1,357	3.44	34.91	(1,500)	3.30	34.90	27.80																	
Station 5740; Sept. 4; latitude 59°40' N., longitude 43°54' W.; depth 144 m.; dynamic height 1,454.896																							
0	2.50	31.39	0	2.50	31.39	25.07		0	2.50	31.39	0	2.50	31.39	25.07									
25	2.15	32.73	25	2.15	32.73	26.17		25	2.15	32.73	25	2.15	32.73	26.17									
50	2.29	33.34	50	2.29	33.34	26.64		50	2.29	33.34	50	2.29	33.34	26.64									
76	2.60	33.48	75	2.60	33.48	26.73		76	2.60	33.48	75	2.60	33.48	26.73									
101	3.58	33.91	100	3.55	33.90	26.97		101	3.58	33.91	100	3.55	33.90	26.97									
131	4.48	34.36						131	4.48	34.36													

In the following table the potential density is represented by $\sigma_{t\theta}$ which signifies 1,000 (density-1) at atmospheric pressure and potential temperature t_θ . The concentration of total phosphorus is given in microgram-atoms per liter.

TOTAL PHOSPHORUS DATA COLLECTED IN 1954

Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g/L}$
Station 5690; Aug. 25; latitude 53°43' N., longitude 55°49' W.; depth 130 m.						Station 5698; Aug. 26; latitude 54°58' N., longitude 53°24' W.; depth 1,719 m.					
0	22.38	0.51	76	26.42	1.20	0	26.09	0.42	300	27.68	1.35
25	26.18	0.52	102	26.45	1.21	25	26.35	0.38	377	27.73	1.12
51	26.37	1.12				50	27.22	0.83	565	27.72	1.22
						75	27.43	1.08	754	27.76	1.42
						100	27.53	1.27	946	27.77	1.38
						150	27.65	1.18	1,432	27.77	1.31
						200	27.66	1.19			
Station 5691; Aug. 25; latitude 53°50.5' N., longitude 55°35' W.; depth 218 m.						Station 5699; Aug. 26; latitude 55°02' N., longitude 53°14' W.; depth 2,103 m.					
0	22.60	0.53	100	26.63	1.15	0	26.30	0.52	297	27.75	1.20
25	26.11	0.77	151	26.83	1.15	25	26.42	0.56	378	27.76	1.18
50	26.38	1.08	201	27.15	1.88	50	27.16	0.76	563	27.77	1.32
75	26.48	1.30				74	27.33	0.95	745	27.78	1.16
						99	27.53	1.21	924	27.79	1.19
						149	27.65	1.19	1,413	27.81	1.25
						198	27.69	1.30	1,920	27.85	1.17
Station 5692; Aug. 26; latitude 53°53.5' N., longitude 55°26' W.; depth 178 m.						Station 5700; Aug. 26; latitude 55°14' N., longitude 52°51' W.; depth 3,113 m.					
0	23.27	0.57	75	26.70	1.16	0	26.26	0.53	381	27.75	1.11
25	26.20	0.60	101	26.81	1.13	25	26.30	0.46	575	27.76	1.11
50	26.58	1.04	151	27.08	1.05	50	27.34	0.79	771	27.76	1.24
						75	25.57	1.02	971	27.78	1.28
						101	27.62	1.16	1,450	27.79	1.30
						151	27.67	1.11	2,006	27.84	1.27
						201	27.71	1.18	2,536	27.89	1.17
						302	27.73	1.15	2,981	27.94	1.12
Station 5693; Aug. 26; latitude 54°04' N., longitude 55°04' W.; depth 165 m.						Station 5701; Aug. 26-27; latitude 55°31.5' N., longitude 52°25' W.; depth 3,182 m.					
0	23.98	0.41	75	26.60	1.31	0	26.20	0.57	385	27.74	1.27
25	26.43	1.07	99	26.68	1.24	25	26.63	0.68	585	27.75	1.19
50	26.47	1.09	149	26.97	1.15	50	27.48	1.25	789	27.76	1.24
						75	27.53	1.29	999	27.77	1.16
						101	27.60	1.28	1,520	27.80	1.16
						151	27.63	1.29	2,037	27.82	1.24
						201	27.69	1.30	2,535	27.84	1.20
						302	27.72	1.23	3,022	27.89	1.15
Station 5694; Aug. 26; latitude 54°10.5' N., longitude 54°54' W.; depth 178 m.						Station 5702; Aug. 27; latitude 55°56' N., longitude 51°48' W.; depth 3,457 m.					
0	24.06	0.45	76	26.78	1.18	0	26.42	0.59	583	27.77	1.16
25	26.25	0.55	101	26.91	1.05	25	26.63	0.63	786	27.77	1.20
50	26.62	1.17	151	27.11	1.16	50	27.48	1.16	993	27.79	1.14
						75	27.53	1.21	1,502	27.79	1.20
						100	27.61	1.26	2,018	27.82	1.19
						150	27.67	1.20	2,521	27.84	1.19
						201	27.71	1.24	3,018	27.89	1.15
						301	27.74	1.16	3,367	27.94	1.07
						355	27.75	1.14			
Station 5695; Aug. 26; latitude 54°28' N., longitude 54°24' W.; depth 220 m.						Station 5696; Aug. 26; latitude 54°46' W., longitude 53°51' W.; depth 329 m.					
0	24.22	0.31	100	26.76	1.12	0	24.77	0.42	100	27.04	1.09
25	26.18	0.53	151	26.98	1.23	25	26.17	0.55	150	27.30	1.11
50	26.48	0.57	201	27.10	1.13	50	26.68	1.08	201	27.42	1.21
75	26.62	1.09				75	26.91	1.15	301	27.51	1.19
Station 5696; Aug. 26; latitude 54°46' W., longitude 53°51' W.; depth 329 m.						Station 5697; Aug. 26; latitude 54°52' N., longitude 53°38' W.; depth 657 m.					
0	24.77	0.42	100	27.04	1.09	0	25.98	0.71	143	27.49	1.25
25	26.17	0.55	150	27.30	1.11	24	26.75	0.74	190	27.54	1.29
50	26.68	1.08	201	27.42	1.21	48	27.06	1.08	285	27.60	1.29
75	26.91	1.15	301	27.51	1.19	71	27.20	1.10	372	27.62	1.27
						95	27.33	1.14	574	27.69	1.22
Station 5697; Aug. 26; latitude 54°52' N., longitude 53°38' W.; depth 657 m.						Station 5698; Aug. 26; latitude 54°58' N., longitude 53°24' W.; depth 1,719 m.					
0	25.98	0.71	143	27.49	1.25	0	26.09	0.42	300	27.68	1.35
24	26.75	0.74	190	27.54	1.29	25	26.35	0.38	377	27.73	1.12
48	27.06	1.08	285	27.60	1.29	50	27.22	0.83	565	27.72	1.22
71	27.20	1.10	372	27.62	1.27	75	27.43	1.08	754	27.76	1.42
95	27.33	1.14	574	27.69	1.22	100	27.53	1.27	946	27.77	1.38
						150	27.65	1.18	1,432	27.77	1.31
						200	27.66	1.19			

TOTAL PHOSPHORUS DATA COLLECTED IN 1954—Continued

Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$
Station 5703; Aug. 27; latitude 56°33.5' N., longitude 50°38' W.; depth 3,585 m.						Station 5709; Aug. 29; latitude 59°16' N., longitude 45°05' W., depth 2,030 m.					
0	26.54	0.77	580	27.76	1.18	0	27.17	1.00	298	27.65	1.24
25	26.83	0.64	771	27.76	1.19	25	27.17	0.90	364	27.66	1.30
50	27.47	1.25	962	27.78	1.18	50	27.25	0.97	541	27.70	1.24
75	27.62	1.21	1,460	27.77	1.23	75	27.48	1.15	781	27.73	1.22
99	27.66	1.15	1,967	27.79	1.28	99	27.57	1.07	883	27.76	1.02
149	27.71	1.29	2,426	27.82	1.26	149	27.59	1.17	1,343	27.79	1.15
199	27.73	1.29	2,908	27.86	1.14	199	27.60	1.25	1,792	27.85	1.13
298	27.75	1.26	3,392	27.91	1.12						
387	27.76	1.20									
Station 5704; Aug. 27; latitude 57°05.5' N., longitude 49°34' W.; depth 3,566 m.						Station 5710; Aug. 29; latitude 59°23' N., longitude 44°54' W.; depth 1,271 m.					
0	26.52	0.53	563	27.76	1.14	0	27.24	0.92	189	27.51	1.11
24	26.56	0.57	749	27.77	1.16	24	27.24	0.87	284	27.61	1.18
47	27.51	1.06	936	27.79	1.19	47	27.24	0.95	288	27.63	1.09
71	27.59	1.26	1,429	27.79	1.15	71	27.26	0.93	441	27.64	1.19
95	27.65	1.31	1,936	27.77	1.21	95	27.27	0.96	600	27.67	1.19
142	27.69	1.28	2,458	27.84	1.05	142	27.40	1.02	787	27.70	1.17
189	27.72	1.19	2,989	27.88	1.11						
284	27.74	1.22	3,462	27.93	1.10						
376	27.73	1.14									
Station 5705; Aug. 28; latitude 57°38' N., longitude 48°28' W.; depth 3,475 m.						Station 5711; Aug. 29; latitude 59°30' N., longitude 44°16' W.; depth 196 m.					
0	26.58	0.56	581	27.76	1.17	0	26.36	0.60	78	27.05	0.88
27	27.20	0.83	771	27.78	1.25	26	26.44	0.66	105	27.12	0.90
53	27.60	1.15	960	27.79	1.24	52	26.84	0.91	156	27.28	0.94
80	27.66	1.22	1,461	27.79	1.23						
106	27.68	1.21	1,975	27.83	1.14						
160	27.72	1.22	2,560	27.86	1.17						
214	27.72	1.28	3,062	27.91	1.11						
320	27.75	1.22	3,450	27.95	1.16						
389	27.76	1.19									
Station 5706; Aug. 28; latitude 58°09.5' N., longitude 47°13' W.; depth 3,200 m.						Station 5712; Aug. 29; latitude 59°32' N., longitude 44°07' W.; depth 170 m.					
0	26.49	0.57	411	27.75	1.23	0	26.00	0.80	76	27.08	1.12
25	27.31	1.13	613	27.76	1.24	25	26.94	0.90	101	27.10	1.22
50	27.60	1.30	814	27.78	1.25	50	27.02	0.93	150	27.33	1.35
75	27.66	1.26	1,012	27.79	1.21						
100	27.68	1.22	1,525	27.80	1.30						
150	27.71	1.25	2,041	27.83	1.24						
201	27.72	1.16	2,515	27.88	1.10						
301	27.75	1.23	3,000	27.93	1.06						
Station 5707; Aug. 28; latitude 58°40.5' N., longitude 46°16' W.; depth 2,562 m.						Station 5713; Aug. 29; latitude 59°40' N., longitude 43°54' W.; depth 151 m.					
0	26.61	0.67	400	27.74	1.25	0	26.35	0.99	71	26.59	1.34
25	27.23	0.85	598	27.76	1.20	24	26.48	0.99	94	26.91	1.20
50	27.55	1.16	794	27.77	1.22	47	26.57	1.11	124	27.19	1.28
75	27.63	1.21	988	27.77	1.28						
151	27.67	1.21	1,491	27.81	1.20						
201	27.69	1.22	2,002	27.86	1.25						
302	27.71	1.22	2,453	27.91	1.07						
Station 5708; Aug. 29; latitude 59°03.5' N., longitude 45°29' W.; depth 2,378 m.						Station 5714; Aug. 29; latitude 59°42' N., longitude 43°44' W.; depth 153 m.					
0	26.86	0.92	383	27.73	1.47	0	26.14	0.95	69	26.37	0.94
25	27.00	0.89	572	27.75	1.30	23	26.16	1.15	93	26.64	1.22
50	27.56	1.18	758	27.75	1.22	46	26.19	1.22	138	26.98	1.31
75	27.61	1.38	944	27.77	1.25						
100	27.64	1.23	1,432	27.81	1.25						
150	27.66	1.30	1,930	27.86	1.25						
200	27.68	1.31	2,298	27.88	1.07						
300	27.72	1.30									
Station 5709; Aug. 29; latitude 59°44.5' N., longitude 42°53' W.; depth 172 m.						Station 5715; Aug. 29; latitude 59°44' N., longitude 43°12' W.; depth 174 m.					
0	27.07	0.92	82	27.18	1.04	0	26.64	1.03	79	27.12	0.91
28	27.10	1.02	109	27.27	0.99	26	26.79	1.02	104	27.18	0.99
54	27.16	0.97	164	27.39	1.09	52	26.95	1.00	157	27.28	1.02

TOTAL PHOSPHORUS DATA COLLECTED IN 1954—Continued

Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$
Station 5717; Aug. 29; latitude 59°45.5' N., longitude 42°30' W.; depth 340 m.						Station 5724; Aug. 31; latitude 59°58.5' N., longitude 37°19' W.; depth 3,054 m.					
0	27.16	1.00	105	27.48	1.13	23	27.08	0.98	591	27.75	1.25
26	27.16	1.08	157	27.57	1.37	47	27.56	1.25	785	27.76	1.23
53	27.16	1.01	209	27.59	1.30	70	27.60	0.84	976	27.77	1.15
79	27.18	0.94	314	27.62	1.24	94	27.63	1.35	1,472	27.79	1.24
Station 5718; Aug. 30; latitude 59°45' N., longitude 42°24' W.; depth 1,124 m.						141	27.68	1.31	1,972	27.82	1.23
0	27.17	0.94	211	27.58	1.35	187	27.69	1.30	2,323	27.85	1.25
26	27.18	1.03	317	27.62	1.33	281	27.71	1.32	2,813	27.88	1.20
53	27.19	0.95	418	27.64	1.26	396	27.73	1.31			
79	27.42	1.18	617	27.66	1.56	Station 5725; Aug. 31; latitude 59°59' N., longitude 35°49' W.; depth 3,033 m.					
106	27.53	1.27	810	27.67	1.42	0	26.70	0.74	386	27.72	1.30
158	27.56	1.42	1,026	27.69	1.45	24	26.73	0.83	578	27.74	1.31
Station 5719; Aug. 30; latitude 59°45' N., longitude 42°05' W.; depth 1,737 m.						48	27.43	1.19	768	27.76	1.22
0	27.06	1.09	316	27.64	1.58	73	27.56	1.27	958	27.79	1.24
26	27.07	1.20	368	27.65	1.27	97	27.57	1.25	1,450	27.80	1.22
53	27.44	1.45	561	27.71	1.34	145	27.61	1.20	1,952	27.83	1.24
79	27.48	1.42	762	27.75	1.29	193	27.65	1.30	2,466	27.86	1.22
106	27.53	1.46	963	27.78	1.32	290	27.70	1.32	2,907	27.92	1.13
157	27.57	1.40	1,482	27.84	1.14	Station 5726; Aug. 31; latitude 59°17' N., longitude 36°40' W.; depth 2,944 m.					
210	27.62	1.49				0	26.68	0.67	400	27.74	1.43
Station 5720; Aug. 30; latitude 59°44' N., longitude 41°36' W.; depth 1,975 m.						25	26.78	0.85	597	27.76	1.39
0	26.82	0.78	290	27.65	1.29	51	27.45	1.50	792	27.77	1.38
24	27.07	0.93	370	27.68	1.27	76	27.56	1.40	985	27.77	1.41
48	27.45	1.08	558	27.74	1.30	102	27.61	1.30	1,490	27.79	1.48
73	27.51	1.13	751	27.74	1.38	152	27.66	1.43	2,001	27.83	1.52
97	27.54	1.15	945	27.77	1.26	203	27.70	1.42	2,476	27.87	1.50
144	27.59	1.17	1,470	27.83	1.38	305	27.72	1.57	2,877	27.89	1.28
193	27.62	1.20	1,839	27.87	1.24	Station 5727; Sept. 1; latitude 58°31.5' N., longitude 37°25' W.; depth 3,109 m.					
Station 5721; Aug. 30; latitude 59°47' N., longitude 40°48' W.; depth 2,213 m.						0	26.67	1.06	381	27.66	1.27
0	26.82	0.90	322	27.74	1.45	25	26.69	0.69	571	27.73	1.26
27	27.50	1.13	428	27.75	1.36	50	27.45	1.13	759	27.73	1.26
53	27.58	1.30	637	27.76	1.59	76	27.51	1.15	948	27.76	1.24
81	27.61	1.37	843	27.76	1.35	101	27.54	1.15	1,442	27.80	1.20
107	27.63	1.40	1,047	27.79	1.22	151	27.55	1.16	1,947	27.83	1.14
161	27.68	1.38	1,572	27.84	1.24	202	27.58	1.18	2,480	27.87	1.19
215	27.72	1.44	2,097	27.89	1.16	303	27.64	1.23	2,950	27.90	1.21
Station 5722; Aug. 30; latitude 59°53.5' N., longitude 39°46' W.; depth 2,743 m.						Station 5728; Sept. 1; latitude 57°45' N., longitude 38°04' W.; depth 3,219 m.					
0	26.72	0.70	289	27.74	1.21	0	26.68	0.74	602	27.75	1.37
24	26.91	0.82	363	27.75	1.17	25	26.69	0.74	797	27.76	1.30
48	27.58	1.26	544	27.76	1.19	50	27.36	1.14	992	27.77	1.38
72	27.63	1.28	722	27.77	1.20	76	27.52	1.18	1,502	27.80	1.40
96	27.66	1.31	1,377	27.79	1.19	101	27.55	1.19	2,021	27.85	1.35
144	27.69	1.29	1,870	27.83	1.25	151	27.60	1.34	2,526	27.88	1.33
193	27.70	1.18	2,481	27.90	1.13	202	27.64	1.45	3,027	27.89	1.50
Station 5723; Aug. 30; latitude 59°53' N., longitude 38°49' W.; depth 2,871 m.						303	27.67	1.45	3,178	27.89	1.27
0	26.65	1.03	396	27.75	1.30	403	27.71	1.39			
25	26.72	0.75	592	27.76	1.30	Station 5729; Sept. 1; latitude 57°02.5' N., longitude 39°04' W.; depth 3,200 m.					
51	27.55	1.44	787	27.77	1.26	0	26.51	0.92	620	27.75	1.36
76	27.62	1.46	981	27.79	1.28	26	26.55	1.02	826	27.77	1.31
101	27.67	1.36	1,485	27.80	1.26	52	27.43	1.35	1,041	27.78	1.30
152	27.72	1.35	1,999	27.84	1.24	78	27.52	1.41	1,595	27.79	1.29
203	27.71	1.35	2,518	27.89	1.23	103	27.53	1.39	2,033	27.82	1.34
304	27.74	1.26	2,810	27.95	1.18	154	27.59	1.27	2,529	27.86	1.49
						206	27.61	1.33	3,027	27.90	1.45
						309	27.68	1.31	3,149	27.90	1.39
						414	27.72	1.38			

TOTAL PHOSPHORUS DATA COLLECTED IN 1954—Continued

Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$
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Station 5730; Sept. 2; latitude 56°24' N., longitude 40°01' W.; depth 2,671 m.

0	26.42	1.50	388	27.72	1.41
25	26.49	1.19	580	27.74	1.50
50	27.45	1.45	772	27.76	1.45
75	27.53	1.48	976	27.78	1.44
100	27.54	1.38	1,490	27.81	1.45
150	27.61	1.47	1,882	27.85	1.45
200	27.65	1.45	2,374	27.87	1.30
300	27.71	1.58			

Station 5731; Sept. 2; latitude 57°04' N., longitude 41°34' W.; depth 3,290 m.

0	26.54	0.82	494	27.75	1.48
25	26.54	1.08	668	27.75	1.33
49	27.41	1.40	849	27.77	1.29
74	27.52	1.59	1,325	27.80	1.27
98	27.57	1.44	1,835	27.82	1.31
148	27.62	1.42	2,580	27.86	1.27
197	27.64	1.65	3,085	27.90	1.18
295	27.69	1.39	3,290	27.90	1.15
324	27.72	1.47			

Station 5732; Sept. 2; latitude 57°36.5' N., longitude 41°08' W.; depth 3,292 m.

0	26.62	0.75	519	27.75	1.21
26	26.64	0.78	698	27.77	1.29
52	27.52	1.17	881	27.78	1.25
78	27.63	1.22	1,371	27.79	1.19
105	27.66	1.26	1,891	27.80	1.22
156	27.70	1.32	2,644	27.88	1.14
208	27.72	1.28	3,045	27.90	1.15
313	27.74	1.23	3,245	27.93	1.10
343	27.75	1.24			

Station 5733; Sept. 2-3; latitude 58°10' N., longitude 41°08' W.; depth 3,017 m.

0	26.91	0.74	358	27.75	1.15
24	26.92	0.77	558	27.76	1.20
47	27.55	1.16	758	27.76	1.23
71	27.63	1.16	1,458	27.79	1.11
94	27.68	1.19	1,957	27.83	1.20
141	27.69	1.18	2,370	27.85	1.20
188	27.73	1.18	2,720	27.87	1.05
282	27.74	1.14			

Station 5734; Sept. 3; latitude 58°42' N., longitude 42°23' W.; depth 2,506 m.

0	27.00	0.86	325	27.71	1.16
23	27.26	0.88	494	27.76	1.15
46	27.60	1.10	667	27.77	1.20
69	27.61	1.16	845	27.79	1.20
92	27.63	1.15	1,343	27.82	1.17
138	27.66	1.23	1,892	27.86	1.20
184	27.68	1.16	2,252	27.88	1.14
276	27.72	1.20			

Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$	Depth, meters	$\sigma_{t\theta}$	Total P $\mu\text{g}/\text{L}$
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Station 5735; Sept. 4; latitude 58°54.5' N., longitude 42°58' W.; depth 2,012 m.

0	27.24	0.97	316	27.69	1.22
27	27.24	0.95	378	27.70	1.24
53	27.26	0.94	566	27.75	1.24
79	27.58	1.13	754	27.76	1.30
105	27.58	1.17	940	27.78	1.13
159	27.60	1.16	1,428	27.86	1.25
211	27.63	1.24	1,926	27.92	1.21

Station 5736; Sept. 4; latitude 59°04.5' N., longitude 43°19' W.; depth 1,646 m.

0	27.12	0.98	287	27.66	1.21
24	27.16	0.96	349	27.67	1.13
48	27.18	0.98	526	27.70	1.20
72	27.25	1.05	703	27.73	1.24
96	27.48	1.18	886	27.77	1.21
144	27.55	1.20	1,357	27.80	1.10
191	27.61	1.17			

Station 5737; Sept. 4; latitude 59°22' N., longitude 43°40' W.; depth 666 m.

0	26.52	0.88	156	27.51	1.06
26	26.98	0.88	209	27.58	1.10
52	27.14	0.95	399	27.63	1.10
79	27.17	0.96	607	27.66	1.21
105	27.25	1.11			

Station 5738; Sept. 4; latitude 59°26' N., longitude 43°40' W.; depth 279 m.

0	26.21	0.77	100	27.11	0.90
25	26.72	0.86	149	27.45	1.48
50	26.84	0.85	199	27.52	1.20
75	26.92	0.79	248	27.67	1.17

Station 5739; Sept. 4; latitude 59°29' N., longitude 43°51' W.; depth 224 m.

0	25.97	0.72	100	27.07	0.95
25	26.53	0.90	149	27.25	0.94
50	26.90	0.80	199	27.44	1.00
75	26.94	0.83			

Station 5740; Sept. 4; latitude 59°40' N., longitude 43°54' W.; depth 144 m.

0	25.07	0.69	76	26.73	0.85
25	26.17	0.69	101	26.98	0.93
50	26.64	0.74			

U. S. TREASURY DEPARTMENT - - - COAST GUARD

BULLETIN No. 41 *Woods Hole*

INTERNATIONAL ICE OBSERVATION
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Bulletin No. 41

INTERNATIONAL
ICE OBSERVATION AND ICE PATROL
SERVICE

IN THE
NORTH ATLANTIC OCEAN



A. J. BUSH
J. E. MURRAY
FLOYD M. SOULE



CG-188-10

Season of 1955

UNITED STATES
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WASHINGTON 25, D. C.



19 March 1956.

Transmitted herewith is Bulletin No. 41, International Ice Observation and Ice Patrol Service in the North Atlantic Ocean, Season of 1955.

A. C. RICHMOND,
Vice Admiral, U. S. Coast Guard,
Commandant.

Dist (SDL No. 62)

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List 133

ABSTRACT

The authority for, mission, forces assigned and method of operation of the International Ice Patrol during the 1955 ice season are described.

Statistics are presented in connection with the aerial ice observation and communications conducted by the International Ice Patrol in 1955.

Ice reports received by the International Ice Patrol during the year are tabulated. A general description of ice conditions in the Newfoundland area is given. Only 61 bergs drifted south of the 48th parallel during 1955, as compared with the 1900-1955 average, 396 bergs. The distribution of these bergs was abnormal. No bergs were found along the east slope of the Grand Banks or in the Flemish Cap area. The duration of the pack ice in the Grand Banks area was about normal, but the extent of the pack to the south and east of the Newfoundland coast was subnormal. Except for the Strait of Belle Isle, all routes to ports in the Gulf of St. Lawrence and St. Lawrence River were clear by 16 April. The strait of Belle Isle route was navigable by 12 June.

The oceanographic vessel of the patrol made three dynamic topographic surveys during the season and collected additional data during a post-season cruise. Because of the distribution of the ice only the first of the season's surveys extended south of the latitude of Flemish Cap. On the post-season cruise the Bonavista triangle and the South Wolf Island-Cape Farewell section were occupied.

The surface circulation has been discussed in the light of the dynamic topographic charts, and a more detailed examination of the circulation in the upper 1,000 meters in the vicinity of the Labrador Current has been based on the volume transport, mean temperature, heat transport and minimum observed temperature found during 17 occupations of 11 selected sections across that current. Temperature-salinity relationships of the water masses in the Grand Banks region, the relationship between the position of the cold wall and the relative strengths of the adjacent current systems, and the temperature, salinity and total phosphorus conditions found in 1955 have been compared with conditions found in earlier years to the limited extent permitted by the smaller volume of data collected in 1955.

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FOREWORD

This bulletin is No. 41 in the series of annual reports on the International Ice Observation and Ice Patrol Service.

Authors of the section of this bulletin dealing with oceanography were Oceanographer Floyd M. Soule and Lt. John E. Murray, USCG. The remainder was written by LCDR Armand J. Bush, USCG.

INTERNATIONAL ICE PATROL 1955

The International Ice Observation and Ice Patrol Service for 1955 was performed by the U. S. Coast Guard in accordance with the International Convention for the Safety of Life at Sea, 1948, and the U. S. Code, Title 46, Sections 738-738d. As in previous years the major purpose of this service was to protect shipping from the danger of drifting ice in the vicinity of the Grand Banks of Newfoundland. To that end ice information was collected from all available sources, including own forces, evaluated and disseminated to mariners by radio. In addition, the scientific program dealing with the factors influencing the distribution and drift of ice in the North Atlantic Ocean was continued.

The facilities available to Commander, International Ice Patrol, Captain K. S. Davis, USCG, for the duration of the ice season consisted of a staff of 3 officers and 13 enlisted men; radio and landline communication facilities and office space at the U. S. Naval Station, Argentia, Newfoundland; reconnaissance aircraft support provided by the U. S. Coast Guard Air Detachment at Argentia; two patrol cutters, *USCGC Androscooggin* and *USCGC Acushnet*; and an oceanographic survey vessel, *USCGC Evergreen*. For the fifth consecutive year the efficiency of the aerial ice reconnaissance performed by the International Ice Patrol and the distribution of ice in the Grand Banks area made it unnecessary to have a surface patrol. The two patrol cutters remained in a standby status in the United States throughout the ice season.

Commander, International Ice Patrol and his staff arrived at Argentia 24 February to organize the ice patrol office. By means of the pre-season aerial ice reconnaissance carried out by the U. S. Coast Guard Air Detachment at Argentia, the ice situation at that time was known to be favorable; the Grand Banks area was free of bergs, and there was no field ice south of the latitude of Baccalieu Island. The first of the 60 ice observation flights made during the season was flown on 27 February. Radio broadcast of twice daily ice bulletins to mariners was commenced on 7 March. These ice bulletins were also sent over the teletype net to the U. S. Navy Hydrographic Office, Washington, D. C., the Canadian Department of Transport, Halifax, N. S. and the Royal Canadian Navy Radio Station at Albro Lake, N. S. for inclusion in the ice information disseminated by those agencies.

Ice information was collected by the International Ice Patrol during the ice season from several different sources, viz:

(a) International Ice Patrol aerial ice reconnaissance in the Grand Banks area and northward to the Strait of Belle Isle,

(b) commercial and military vessels and aircraft traversing ice-infested areas,

(c) Canadian Department of Transport aerial ice reconnaissance in the Gulf of St. Lawrence and approaches,

(d) U. S. Hydrographic Office ice reports covering the Labrador Sea and Baffin Bay,

(e) various other sources of information regarding local ice conditions in harbors and the approaches thereto, e. g., harbor masters, harbor pilots, signal stations, shipping company representatives.

Ice drift and rate of melting were estimated by means of current charts constructed from oceanographic data collected by *USCGC Evergreen* on three surveys in the ice patrol area,¹ sea surface isotherm charts prepared semimonthly from the sea temperatures reported by shipping and wind data provided by the U. S. Navy Fleet Weather Central at Argentia. The current charts and isotherm charts for the season are shown in figures 13 to 15 and 1 to 8, respectively.

The 1955 ice season in the Grand Banks area was lighter than the average and was the fifth consecutive season in which fewer than the average number of bergs drifted south across latitude 48° N., as shown in the following table:

Year	No. of bergs crossing Lat. 48° N.	Year	No. of bergs crossing Lat. 48° N.
1950-----	460	1955-----	61
1951-----	6	1900-1955 average-----	396
1952-----	14	1900-1955 maximum (in	
1953-----	56	1929)-----	1351
1954-----	312		

The distribution as well as the number of bergs which crossed the 48th parallel during the season was quite different from the normal. No bergs were carried by the Labrador Current down the east slope of the Grand Banks or east toward the Flemish Cap area. Instead, most of the bergs which entered the Grand Banks area ended in positions along the east and south coasts of the Avalon Peninsula and the remainder in the central and northwestern sectors of the Grand Banks. At no time during the season were the United States-European North Atlantic Track Agreement tracks B and C endangered by ice. Of the Canadian-European routes, track D, in effect until 10 April, was not endangered by ice during the season; track E, while in effect from 11 April to 15 May, was easily navigable but encum-

¹ Details of the oceanographic program are presented in another section of this bulletin.

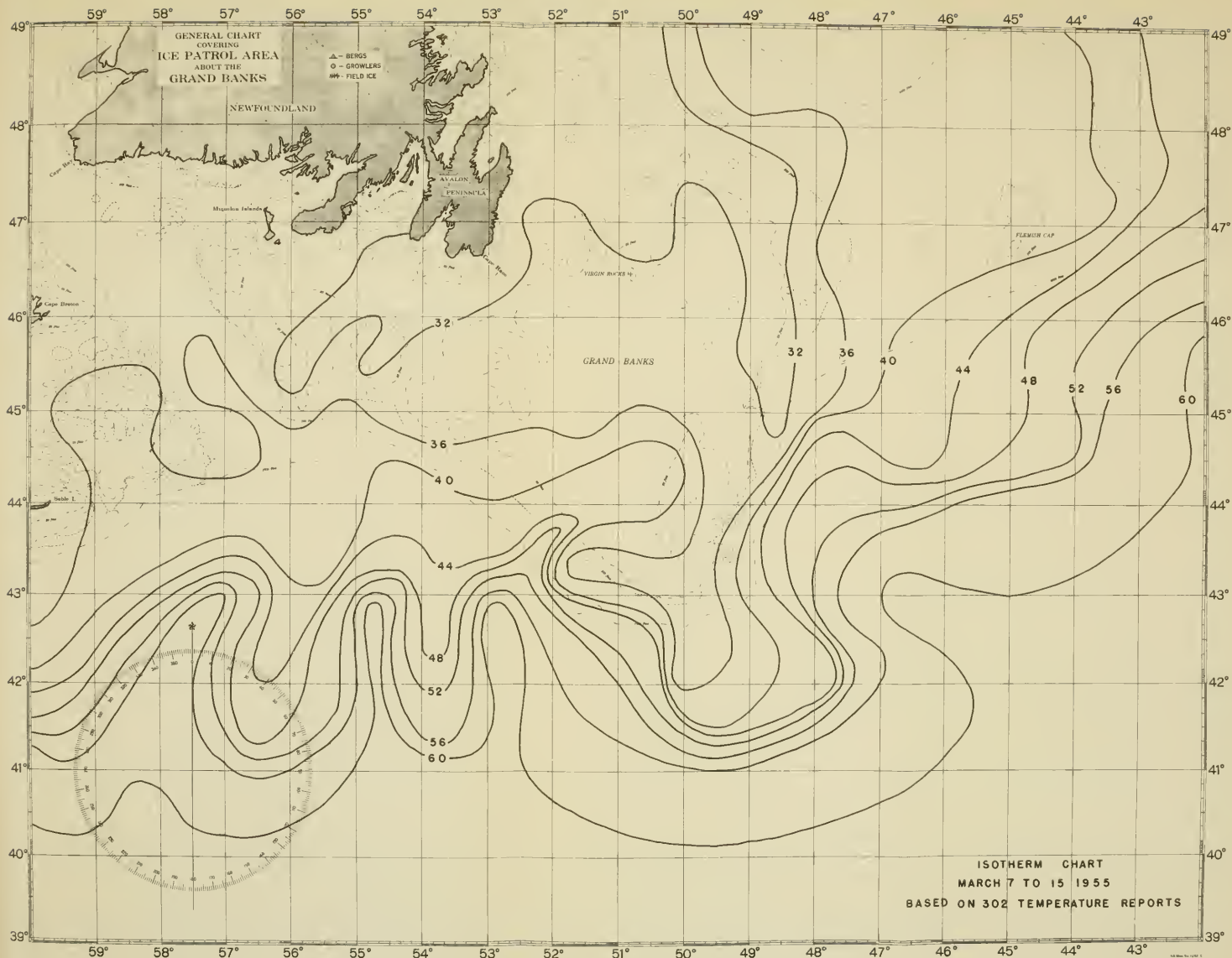


Figure 1—Surface isotherms for the period 7–15 March 1955.

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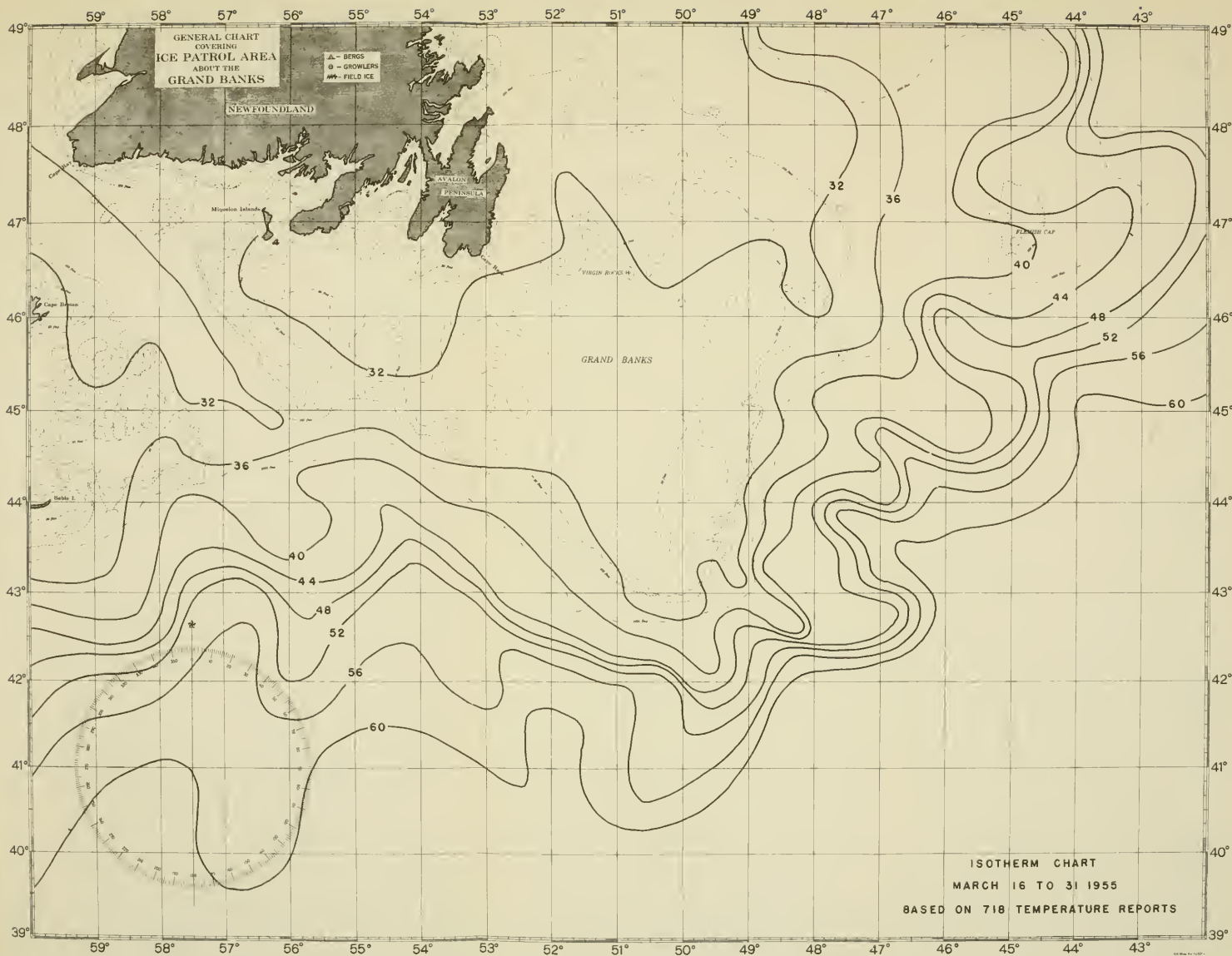


Figure 2—Surface isotherms for the period 16–31 March 1955.

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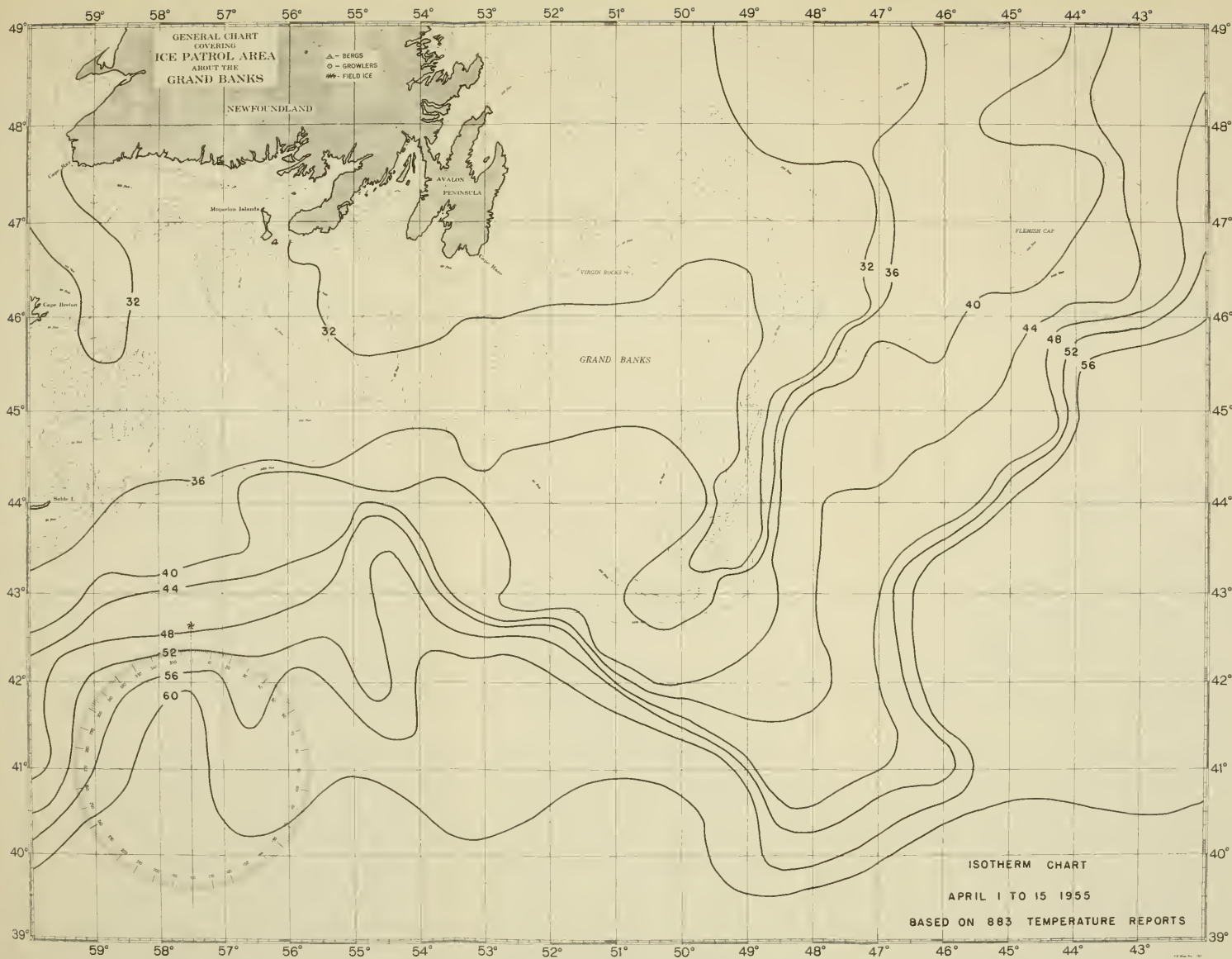


Figure 3—Surface isotherms for the period 1-15 April 1955.

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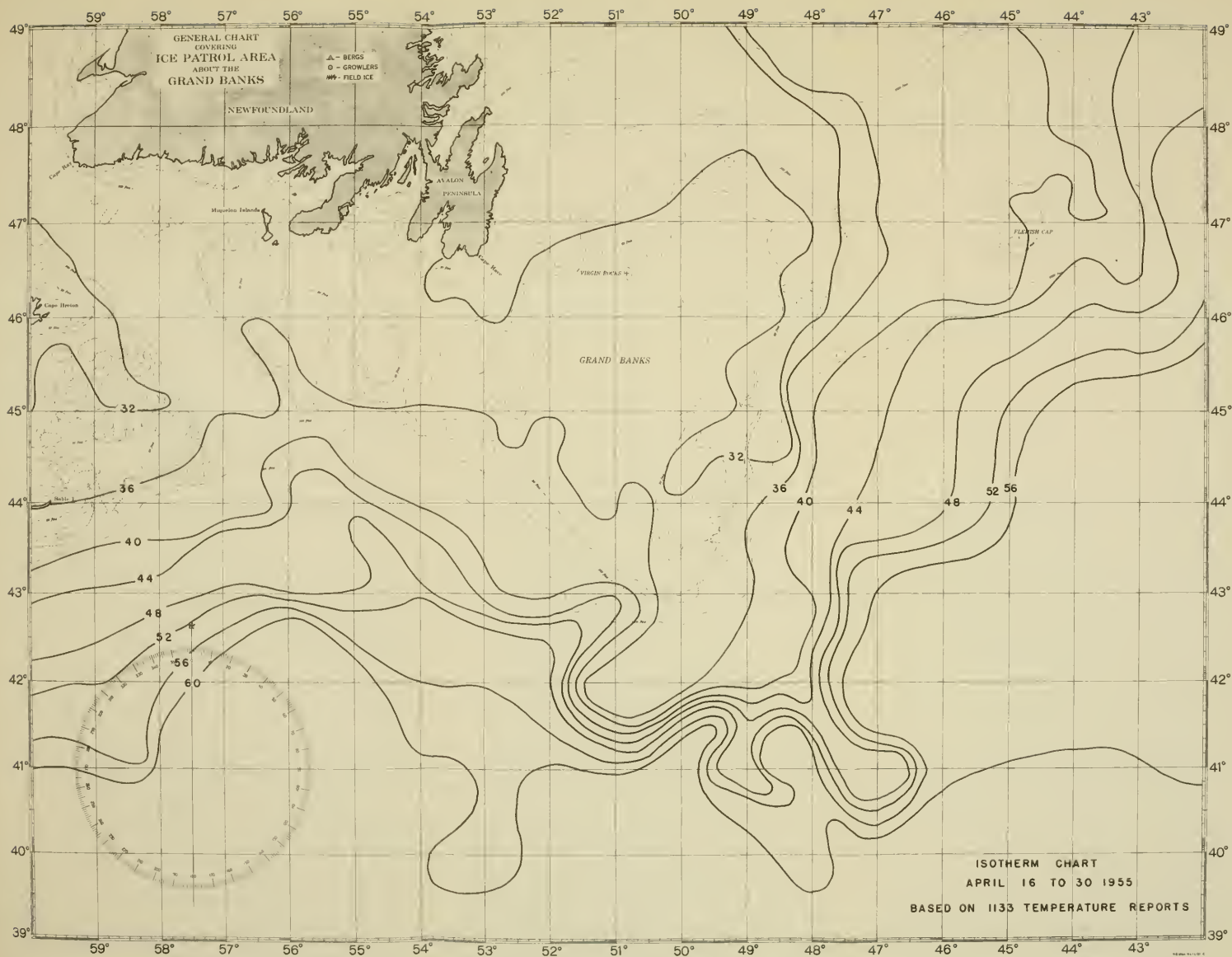


Figure 4—Surface isotherms for the period 16–30 April 1955.

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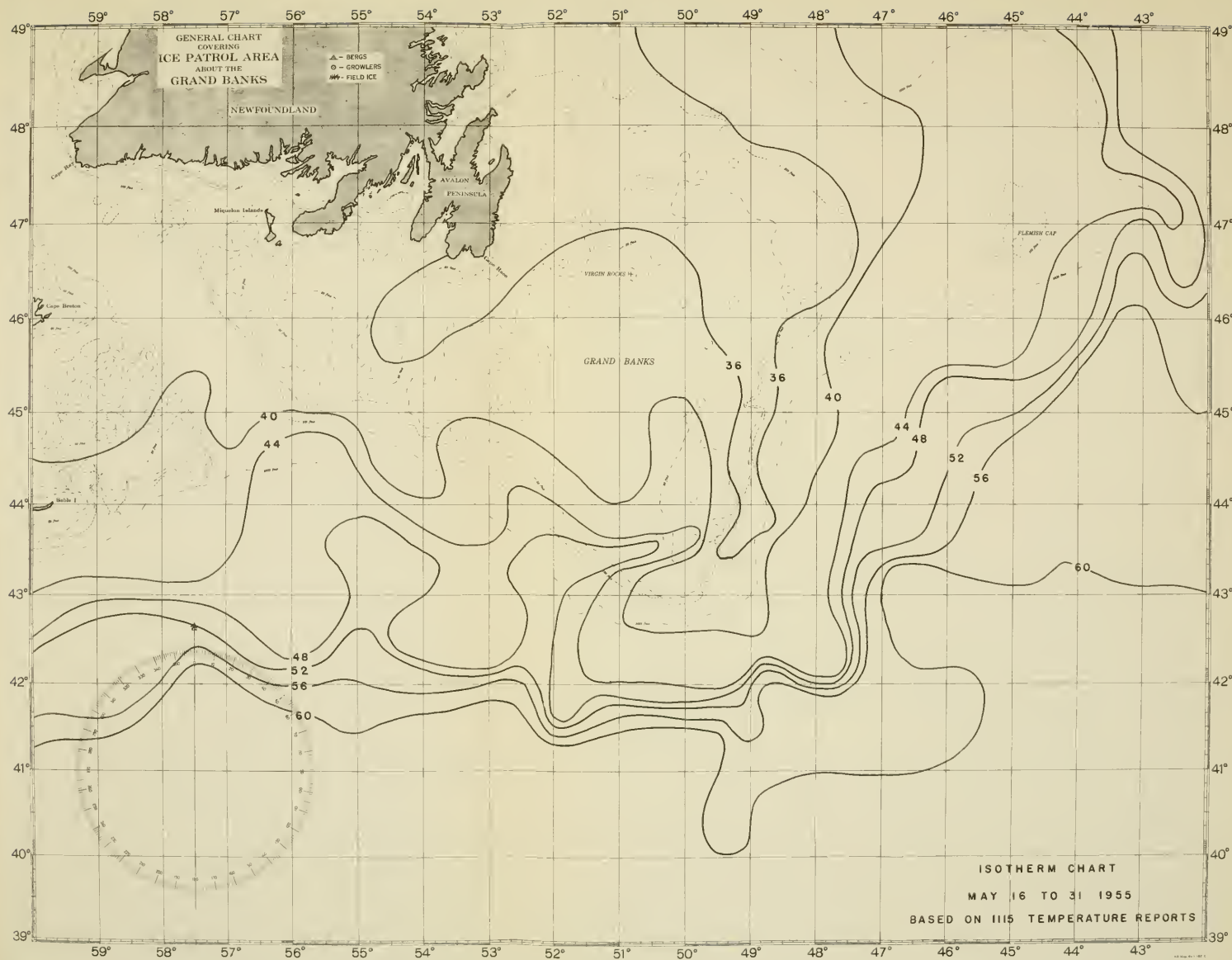


Figure 6—Surface isotherms for the period 16–31 May 1955.

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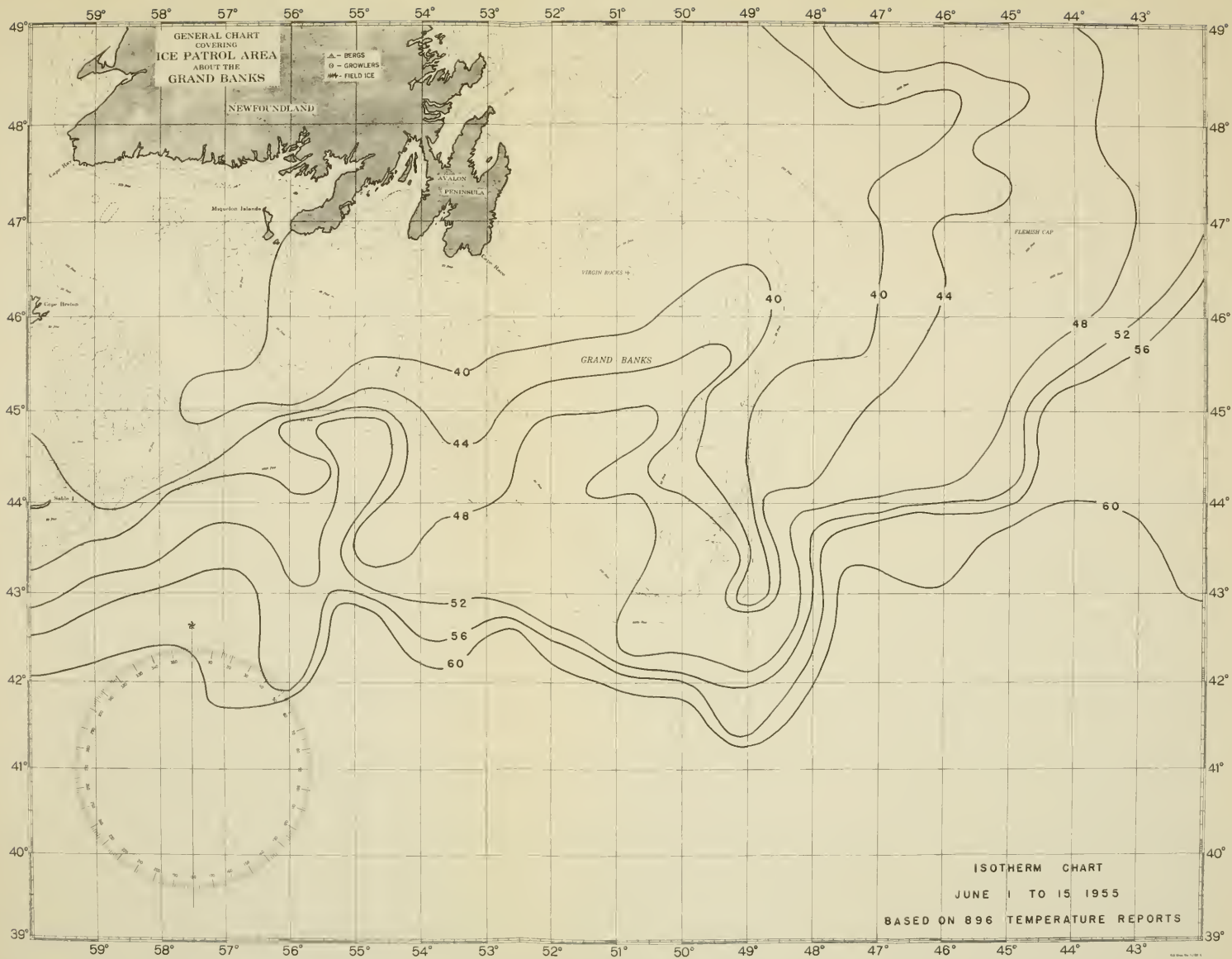


Figure 7—Surface isotherms for the period 1-15 June 1955.

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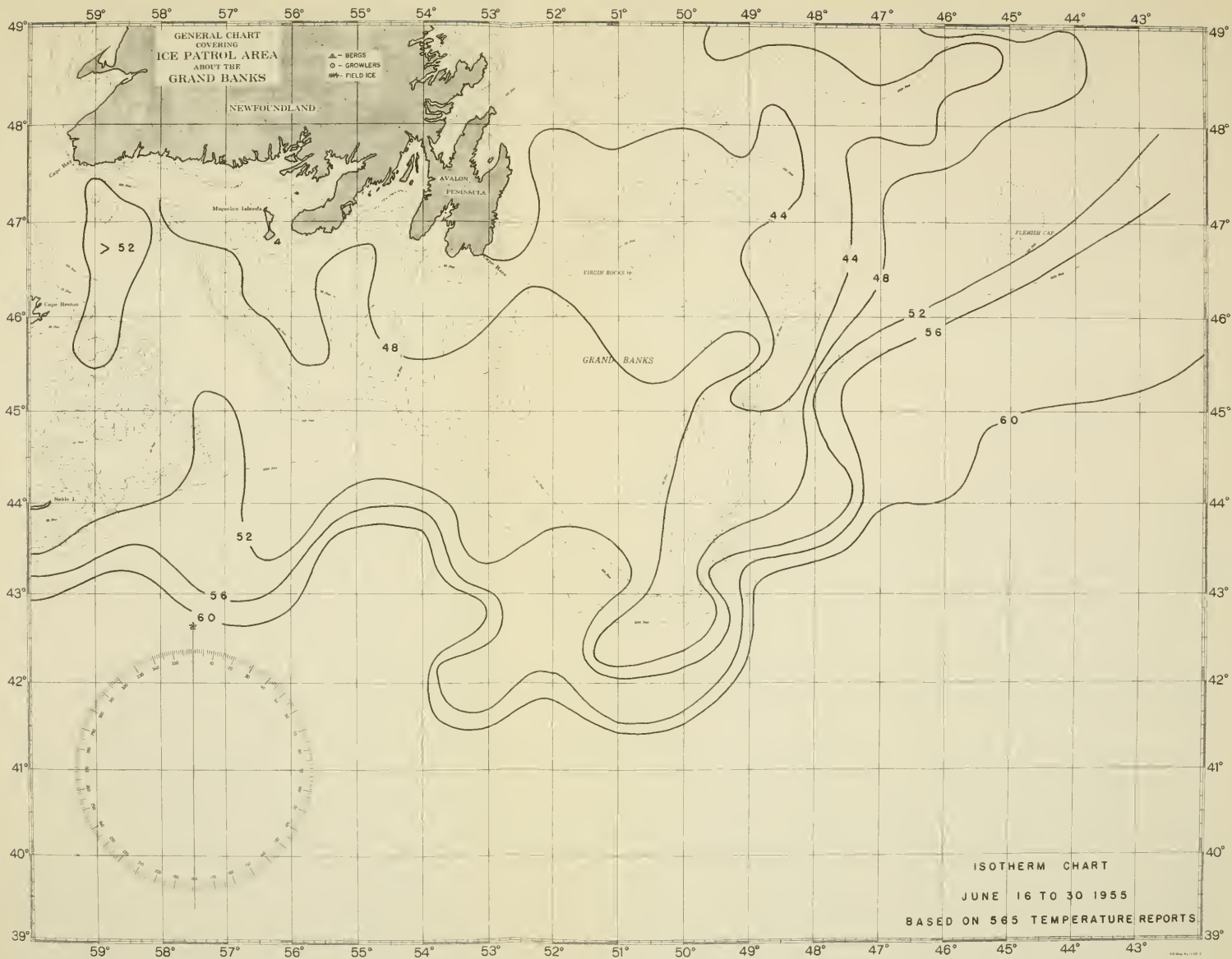


Figure 8—Surface isotherms for the period 16–30 June 1955.

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bered by a few bergs and very light concentrations of sea ice on the Grand Banks; track F, while in effect after 15 May, was clear of ice. The Strait of Belle Isle route, Track G, was navigable with caution by 12 June. An earlier opening of this route was prevented by heavy pack blocking the eastern approaches to the strait, although the strait itself was essentially free of field ice by the last of May. Shipping routes to ports in the Gulf of St. Lawrence and the St. Lawrence River were clear by 16 April, except for occasional patches and strings of sea ice.

The ice threat to the shipping lanes in the Grand Banks area was considered negligible by 10 July. Numerous bergs still existed inside the 1,000 fathom curve off Newfoundland north of the 49th parallel, but their set and drift and high melting rate eliminated them as dangers to the shipping lanes in the Grand Banks area. Broadcast of ice bulletins ceased and the International Ice Patrol office at Argentia was closed on 15 July. However, at the request of Commander, International Ice Patrol, the U. S. Coast Guard Air Detachment at Argentia made several postseason aerial reconnaissances to prevent the undetected drift of any stray berg into the shipping lanes.

AERIAL ICE OBSERVATION

The U. S. Coast Guard Air Detachment at Argentia utilized three PB1G (B-17) type aircraft, supplemented occasionally by one UF type aircraft, to carry out the aerial ice observation program for the International Ice Patrol in 1955. During the season 60 flights were made. The average length and duration of these flights were 942 miles and 7.0 hours, respectively. The longest flight was 1,585 miles in length. The absence of ice on the east slope of the Grand Banks and in the Flemish Cap area permitted the average flight length to be shorter than normal.

As in previous years, all the ice patrol aircraft were equipped with loran receivers and radar, the former being the primary means for navigating the aircraft and the latter for the detection of ice under conditions of low visibility. Identification of radar targets was accomplished by closing the range until the target was sighted visually. Because of low ceilings this was not always possible. The usual flight plan covering the search area was a system of parallel lines spaced at 25-mile intervals. Flights were normally made only on days when the weather forecast promised success in visually searching a major portion of the area to be scouted.

Flight statistics for the season are presented in the following table:

Table I.—AERIAL ICE OBSERVATION STATISTICS FOR THE 1955 ICE SEASON

Month	Number of flights	Number of days on which flights made	Number of days good observing weather ¹	Average visual effectiveness ²	Maximum number days between flights	Miles flown	Hours flown
				<i>Percent</i>			
February (24-28).....	1	1	2	90	4	860	5.5
March.....	7	6	11	56	7	5,846	42.7
April.....	13	13	17	75	5	12,534	92.7
May.....	16	15	11	61	5	16,175	117.0
June.....	16	16	9	36	4	14,237	108.6
July (1-15).....	7	7	6	68	4	6,861	52.8
Total for 1955.....	60	58	56	64	-----	56,513	419.3

¹ Days on which possible to search visually at least 50 percent of scouting area.

² Ratio of area actually searched visually to area planned to be searched.

COMMUNICATIONS

Commander, International Ice Patrol communicated with shipping during the ice season through U. S. Coast Guard Radio Argentina (NIK) and with various interested shore establishments by means of the teletype net.

At 0048 and 1248 G. M. T. daily, ice bulletins were broadcast to shipping on 155, 5320 and 8502 kilocycles. Each bulletin was broadcast twice, once at 15 words per minute and a second time, after a 2-minute interval, at 25 words per minute. All bulletins were concluded with a request that all shipping in the ice patrol area report to NIK all ice sighted, and weather and sea temperatures every 4 hours. Cooperation by shipping was very good in this regard. Merchant ships worked NIK on 425, 454, 468 or 480 kilocycles or their assigned frequency in the 8-megacycle band. NIK worked on 432 or 8650 kilocycles.

By means of the teletype net ice bulletins were sent at 0030 and 1230 G. M. T. to the U. S. Navy Hydrographic Office, Washington, D. C., the Canadian Department of Transport, Halifax, N. S. and the Royal Canadian Navy Radio Station, Albro Lake, N. S.

During the 1955 ice season NIK sent or received 12,285 radio messages and 11,740 landline messages. Statistics concerning the reports received during the season are as follows:

Number of ice reports received from vessels.....	507
Number of vessels furnishing ice reports.....	200
Number of sea surface temperatures reported.....	7297
Number of vessels furnishing sea surface temperatures.....	433
Number of vessels requesting special information.....	59
Number of weather reports relayed to Observer, Washington.....	1441
Total number of vessels worked.....	490

The percentage distribution of reporting vessels by nationality was as follows:

<i>Nationality</i>	<i>Percent of total</i>
Great Britain.....	29. 7
United States of America.....	19. 2
Germany.....	7. 8
Sweden.....	7. 1
Norway.....	5. 9
Panama.....	3. 7
Netherlands.....	3. 3
Italy.....	3. 3
Liberia.....	3. 1
Portugal.....	3. 1
Canada.....	2. 2
France.....	2. 2
Others (14 nations).....	9. 4

ICE CONDITIONS—1955

JANUARY—FEBRUARY

The first ice reported in 1955 to the International Ice Patrol was a berg in 56°27' N., 50°37' W. on 10 February. No other bergs were reported during January or February.

No field ice was reported in the Grand Banks area during January. Aerial reconnaissance on 27 February found the southern and eastern field ice limits to be a line running from Baccalieu Island to 48°30' N., 51°10' W., to 50°00' N., 52°00' W., to 51°10' N., 51°10' W.

MARCH

No bergs drifted south into the Grand Banks area until the last part of March. By the last of the month only 10 bergs and several growlers had penetrated south of the 48th parallel, and none of this ice reached south of latitude 47°13' N. or east of longitude 50°33' W.

The field ice limits progressed south and east throughout the month. On the 30th these limits were a line running from Baccalieu Island to 47°25' N., 50°30' W., to 48°00' N., 49°00' W., to 48°30' N., 48°50' W., to 48°50' N., 48°50' W.

In the Gulf of St. Lawrence area, the steamer track from Cabot Strait to Gaspé Passage was clear throughout the last 3 weeks of March, except for occasional strings and patches of scattered floes and loose slob ice. To the southwest of this track and in the St. Lawrence River heavy concentrations of field ice persisted to the end of the month.

The distribution of ice reported in March in the Grand Banks area is shown graphically in figure 9.

APRIL

More bergs entered the Grand Banks area in April than in any other month of the 1955 ice season. That the ice season would be light was foreshadowed by the fact that only 32 bergs drifted south across the 48th parallel during the month. It was of interest that none of these

32 bergs were carried by the Labrador Current down the east slope of the Grand Banks or east toward the Flemish Cap area. Instead, they drifted into positions along the east and south coasts of the Avalon Peninsula and in the central and northwestern sectors of the Grand Banks where they eventually broke up and melted.

The field ice limits of the previous month advanced during April to the east, south and around Cape Race to the west. The most easterly extension of the field ice limits for the month and for the entire season was attained in the first week of April in position $47^{\circ}30' \text{ N.}$, $47^{\circ}30' \text{ W.}$ The most southerly field ice limits for the month and for the entire season lay along latitude $45^{\circ}10' \text{ N.}$ south of the Avalon Peninsula during the last few days of April. Easterly winds prevailing after 12 April drove the pack against the east coast and westward along the south coast of the Avalon Peninsula as far as longitude $54^{\circ}40' \text{ W.}$ St. John's harbor was blocked by pack ice on 12, 13, and 25-30 April, inclusive.

North of the Grand Banks area a strip of field ice 20 to 40 miles wide lay along the shoreline between Cape Bonavista and Cape Bauld until the 25th, after which the southern end of the strip narrowed somewhat. Approximately 50 bergs were counted in this pack. Heavy pack blocked the Strait of Belle Isle throughout the month.

The pack in the southwest half of the Gulf of St. Lawrence and in the St. Lawrence River rapidly broke up during the first 2 weeks of the month. By 16 April all routes to ports in the gulf and in the St. Lawrence River were essentially free of ice, except the Strait of Belle Isle route.

The distribution of ice reported in April in the Grand Banks area is shown graphically in figure 10.

MAY

Only 14 bergs drifted south across the 48th parallel during May. As in the previous month, no bergs were carried by the Labrador Current down the east slope of the Grand Banks or east into the Flemish Cap area, and all the bergs entering the Grand Banks area in May drifted into positions along the east and south coasts of the Avalon Peninsula and in the central and northwestern sectors of the Grand Banks. A few others were stranded in Trinity Bay and Conception Bay. The most westerly and southerly berg positions reported during the ice season were as follows: $46^{\circ}33' \text{ N.}$, $55^{\circ}25' \text{ W.}$ on 12 May and $44^{\circ}26' \text{ N.}$, $52^{\circ}05' \text{ W.}$ on 14 May, respectively.

The field ice limits in the Grand Banks area receded northward from latitude $45^{\circ}10' \text{ N.}$ on 1 May to the latitude of Cape Freels on 31 May. Strong easterly winds occurring in the first part of the month drove the field ice limits to the most westerly longitude of the ice season, $56^{\circ}40' \text{ W.}$, between the south coast of Newfoundland and the 46th parallel. The field ice south of Newfoundland and along

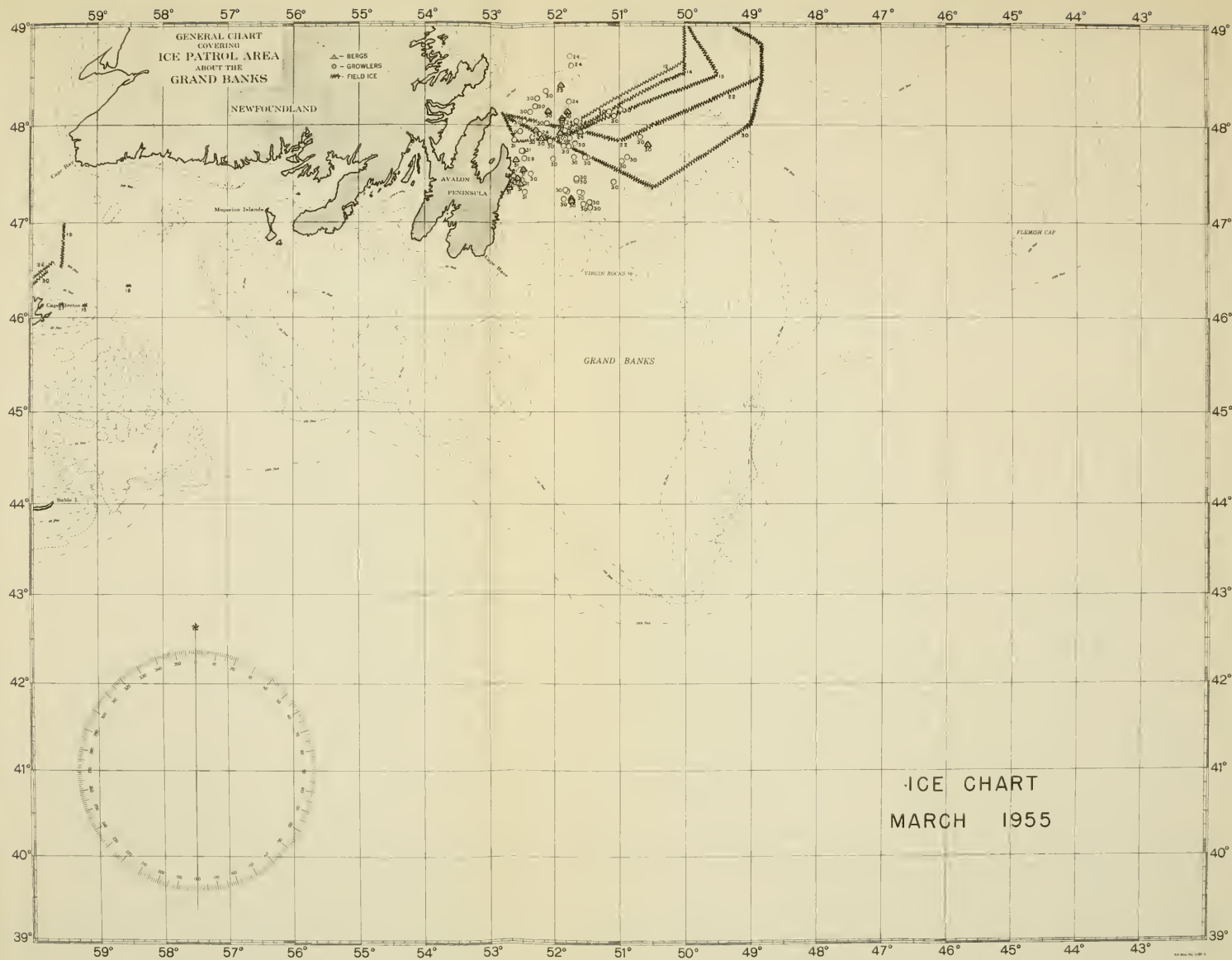


Figure 9—Ice conditions, March 1955. Figures indicate day of month ice was sighted or reported.

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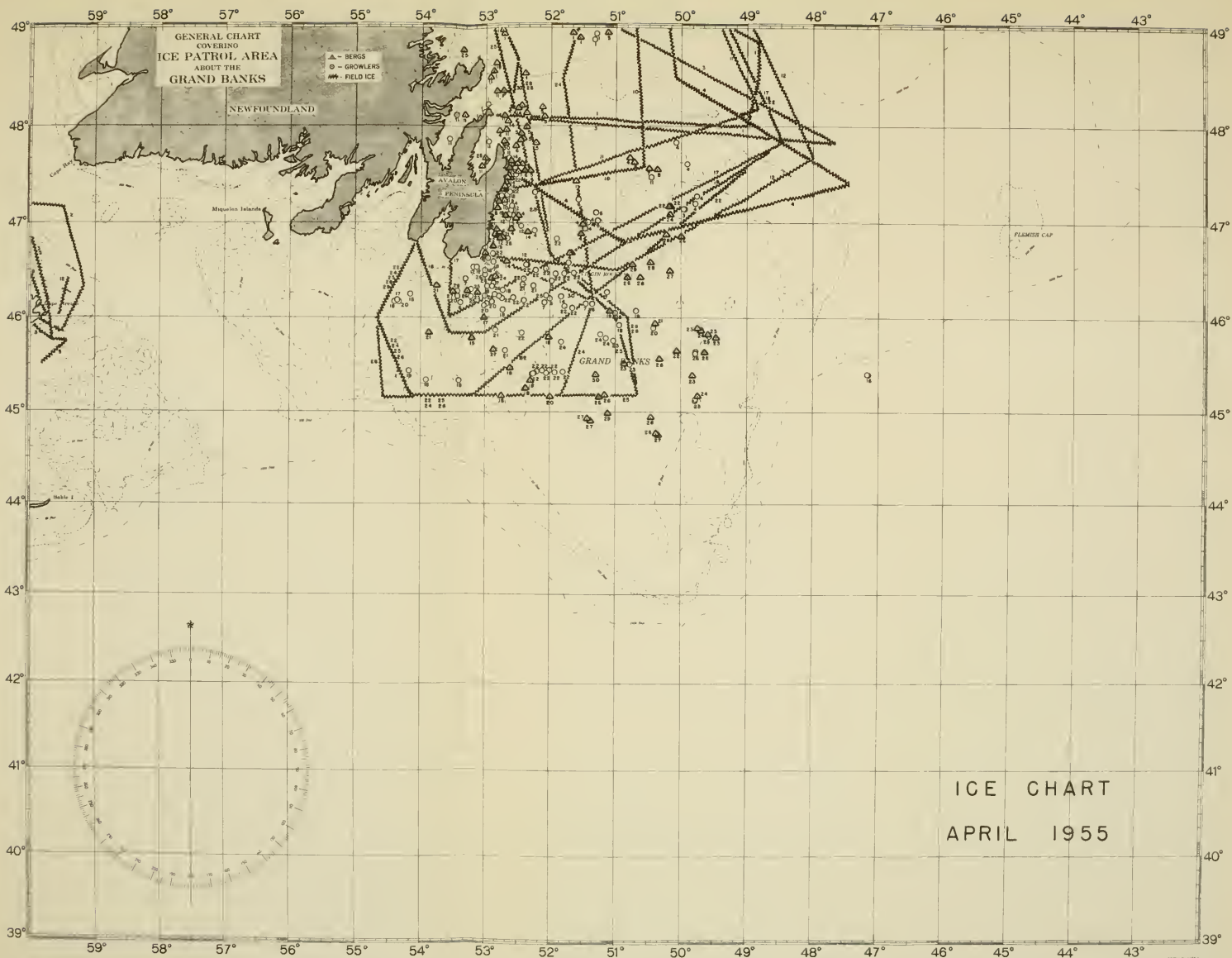


Figure 10—Ice conditions, April 1955. Figures indicate day of month ice was sighted or reported.

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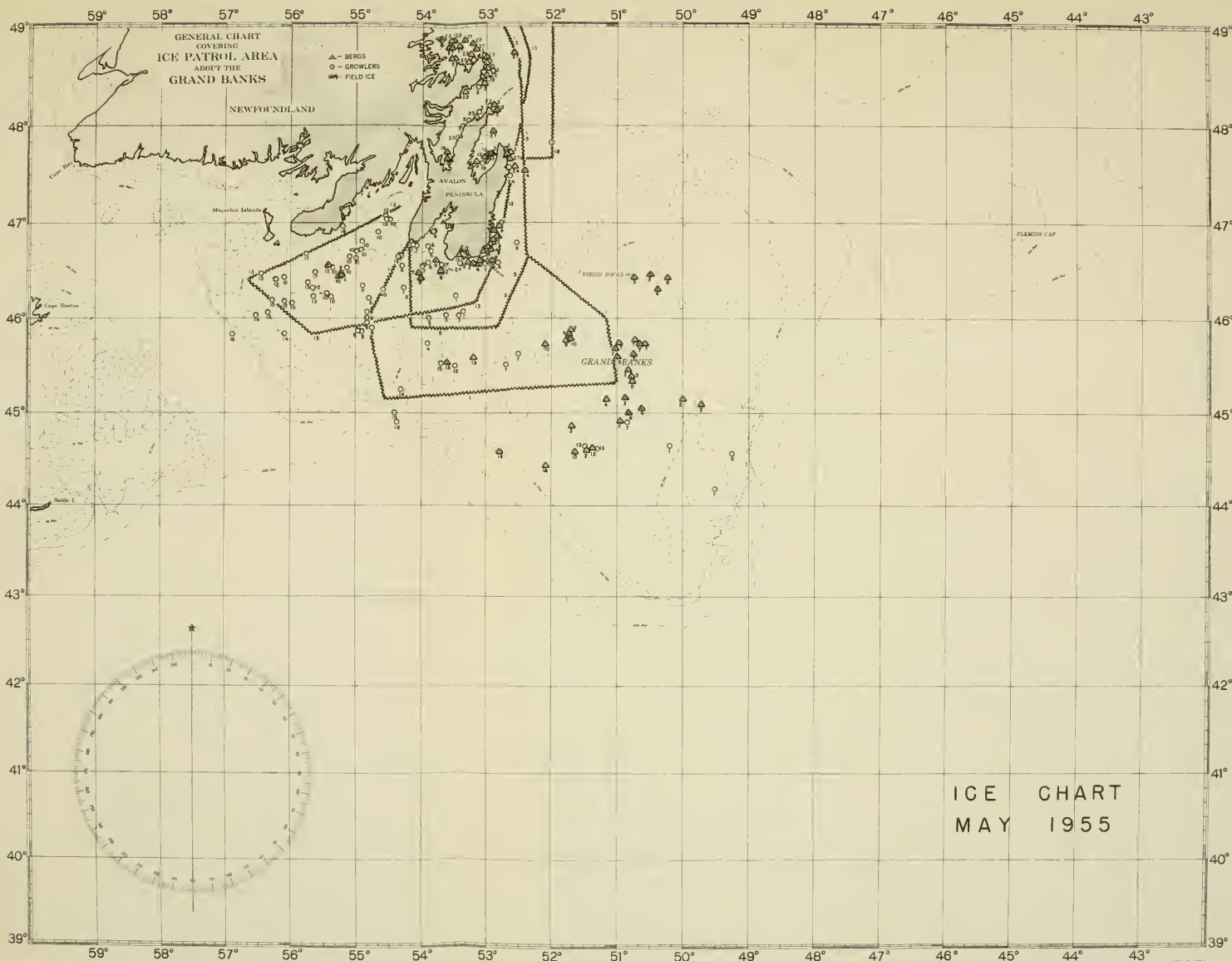


Figure 11—Ice conditions, May 1955. Figures indicate day of month ice was sighted or reported.

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the east coast of the Avalon Peninsula was not very heavy and melted so rapidly that by 18 May there was none left south of the latitude of Cape St. Francis. St. John's harbor was blocked by close pack from 10-14 May, inclusive.

North of the Grand Banks area a strip of close pack ice 10 to 40 miles wide extended northward along the coastline from Fogo Island beyond Belle Isle during the entire month. Many bergs were distributed throughout the length of this pack. By the middle of May the Strait of Belle Isle was almost clear of field ice, but heavy pack blocking the eastern entrance of the strait kept this route closed to navigation for the remainder of the month.

The distribution of ice reported in May in the Grand Banks area is shown graphically in figure 11.

JUNE

Except for several small bergs stranded close inshore along the east and south coasts of the Avalon Peninsula the Grand Banks area was clear of ice during the first 3 weeks of June. After the 21st of the month several bergs moved south across the 49th parallel, four of them between longitudes $48^{\circ}35'$ W. and $51^{\circ}10'$ W., the remainder close inshore along the east coast of Newfoundland where they stranded. This ice was in the van of about 200 bergs released by the breakup of the Labrador pack in May and June into the area inside the 1,000-fathom curve between the Grand Banks and the latitude of the Strait of Belle Isle. Except for five small bergs which stranded in the bays along the east coast of the Avalon Peninsula, none of these 200 bergs ever reached as far south as the 48th parallel. Seasonal warming of the sea surface, prevailing southerly wind components and the weakness of the Labrador Current combined to prevent their advance south of that line.

By 13 June almost no field ice remained south of the main steamer lanes approaching the Strait of Belle Isle from the east-northeast. However, heavy patches of field ice from the disintegrating pack off Labrador remained just to the north of that route inside the 1,000-fathom curve almost to the end of June.

The distribution of ice reported in June in the Grand Banks area is shown graphically in figure 12.

JULY-AUGUST

During July and August the Grand Banks area was clear of ice except for four or five small bergs in the extreme northerly sector between the 49th and 52d meridians. No bergs crossed the 48th parallel during this period. In the area off Newfoundland inside the 1,000-fathom curve between the Grand Banks and the latitude of Belle Isle, the number of bergs dwindled from about 100 on 1 July to about two dozen on the last day of August.

SEPTEMBER-OCTOBER

Except for a small berg in Bonavista Bay, no bergs were reported south of the 50th parallel in September or October. Approximately six bergs were reported during this period between the 50th and 52d parallels inside the 1,000-fathom curve off Newfoundland.

NOVEMBER-DECEMBER

No ice was reported in November or December.

TABLE OF ICE REPORTS, 1955

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' /	° ' /	
1	Feb. 10	OSV Bravo.....	56 27	50 37	Medium berg.
2	Feb. 11	.....do.....	56 29	50 49	Medium berg and growler.
3	Feb. 16	Swiss Airlines.....	Area in the vicinity of		Large floes, up to 20 square miles.
4	.....do.....	Hydro.....	50 00 | 53 00 WNW of a line from 51 00 | 52 00		
5	Feb. 22	USCG aircraft.....	49 00 | 51 00 From Baccalieu Island to Cape Bonavista and 40 miles seaward.		Patches of broken field ice.
6	Feb. 27	Ice Patrol plane.....	West and north of a line from Cape Bonavista, Newfoundland to 48 30 | 51 10 50 00 | 52 00		Scattered to broken field ice.
7	.....do.....	.....do.....	51 10 | 51 10 Between Baccalieu Island and Cape Bonavista, Newfoundland.		
8	Mar. 1	Dettifoss.....	48 37 | 50 25		Light ice floes.
9	Mar. 2	Lyngenfiord.....	48 19 | 50 47		Three heavy pieces field ice.
10	Mar. 4	Ice Patrol plane.....	48 11 | 50 27		
11	.....do.....	.....do.....	49 20 | 51 23		Small berg.
12	.....do.....	.....do.....	49 32 | 52 30		Do.
13	.....do.....	.....do.....	50 05 | 52 05		Do.
14	.....do.....	.....do.....	50 21 | 52 34		Do.
15	.....do.....	.....do.....	50 23 | 52 33		Do.
16	.....do.....	.....do.....	North and west of a line from Baccalieu Island to 48 05 | 52 00		Scattered to broken field ice.
17	.....do.....	.....do.....	Between Grates Point and Cape Bonavista, Newfoundland. West of a line from 49 15 | 50 20		Scattered to close field ice.
18	Mar. 7	Godafoss.....	49 40 | 52 00		
19	Mar. 9	Ice Patrol plane.....	50 45 | 51 55 48 23 | 50 20		Field ice.
20	.....do.....	Canadian Dept. of Transport.	North and west of a line from Baccalieu Island to 47 50 | 52 35		Scattered to broken field ice.
21	.....do.....	.....do.....	47 50 | 52 00 48 40 | 50 00 thence north.		
			Northumberland Strait to West Point, Prince Edward Island to Bay Chaleur.		90 percent cover, field ice.
			North side Bay Chaleur to Gaspé Harbor.		Clear.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
22	Mar. 9	Canadian Dept. of Transport.	Gaspe Harbor to South-west Point, Anticosti Island to 48 50 | 62 50 48 50 | 62 50		Loose drift ice.
23	do	do	to Magdalen Islands to St. Paul Island.		Clear.
24	do	do	Along west coast Cape Breton Island.		Loose drift ice.
25	Mar. 10	do	Northumberland Strait. Inside line from 47 10 | 63 40 46 55 | 62 15		90 percent cover, field ice.
26	do	do	to 48 20 | 62 20 Bonaventure Island to		Ice field, 70 percent cover.
27	Mar. 11	Dutch aircraft	47 10 | 63 40 54 20 | 50 15		Medium berg.
28	Mar. 12	Arctic Prowler	53 00 | 53 30		Heavy field ice.
29	Mar. 13	Hjords Thorden	48 32 | 50 00		Field ice.
30	do	Arctic Prowler	51 50 | 53 55		Heavy field ice.
31	Mar. 14	do	52 30 | 53 15		Field ice.
32	Mar. 15	Invicta	46 08 | 59 11		Ice field, 2 miles long.
33	do	Ranenfjord	48 30 | 49 31		Field ice.
34	do	Canadian Department of Transport.	Northumberland Strait		70 percent cover.
35	do	do	Along coast, West Point to North Point, Prince Edward Island, and to limit 35 mile visibility.		Close pack.
36	do	do	South side Bay Chaleur		Do.
37	do	do	Gaspe Passage to 48 20 | 62 05 48 20 | 62 05		Small fields loose drift ice.
38	do	do	to Bird Rocks to St. Paul Island.		Clear.
39	do	do	Along coast from Cape St. Lawrence to Pictou Harbor.		Close pack ice.
40	do	do	Between Cape Smoky, Cape Breton Island and Ciboix Island.		Loose drift ice.
41	do	Arctic Prowler	52 40 | 53 18 North of a line from Baecaliu Island to 47 50 | 51 30 to 47 50 | 50 30		Heavy field ice.
42	Mar. 16	Ice Patrol plane	to 48 26 | 48 30 to 48 50 | 48 50 to 49 20 | 49 40		Scattered to broken field ice.
43	do	do	thence northward. 48 00 | 48 05		Small patch field ice.
44	Mar. 17	USCGC Bibb	51 04 | 49 20		2 small bergs and many growlers.
45	do	do	51 15 | 49 08		Large berg.
46	do	Cairnavon	48 42 | 48 51		Radar targets, probably field ice.
47	do	USCGC Bibb	48 50 | 49 05		Field ice.
48	do	do	51 04 | 49 20		Extensive field ice.
49	do	Hydro	Along south shore of St. St. Paul Island.		Strips of field ice two miles wide.
50	Mar. 18	Arctic Prowler	52 10 | 54 35		3 bergs.
51	do	do	52 10 | 54 35		Heavy floe ice.
52	Mar. 19	do	52 15 | 54 17		4 bergs
53	do	do	52 15 | 54 17		Heavy floe ice.
54	do	Canadian Department of Transport.	Northumberland Strait		90 percent cover.
55	do	do	West Point to North Point, P. E. I. to New Brunswick coast.		100 percent cover.
56	do	do	Bonaventure Island to Magdalen Islands.		Numerous heavy pieces and new slob.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
57	Mar. 19	Canadian Department of Transport.	45 31	59 53	Edge pack ice.
58	do.	do.	47 00	59 30	Ice field 5 miles by 20 miles.
59	Mar. 20	Ice Patrol plane	46 20	58 30	Small berg.
60	do.	do.	51 20	53 20	Do.
61	do.	do.	51 57	52 09	Medium berg.
62	do.	do.	52 35	52 42	Do.
63	do.	do.	52 55	52 31	Do.
64	do.	do.	53 04	52 09	Large berg.
65	do.	do.	53 11	52 04	Growler.
66	do.	do.	50 40	52 21	Do.
67	do.	do.	50 43	53 20	Do.
68	do.	do.	51 15	52 51	Do.
69	do.	do.	52 55	52 25	Scattered field ice.
70	do.	do.	47 45	51 10	90 percent cover field ice.
71	Mar. 21	BOAC plane	53 20	52 00	Large berg.
72	do.	Orion	50 20	48 42	
73	Mar. 22	USNS Sgt. Jonah E. Kelley.	48 23	49 10	Heavy field ice.
74	do.	Vittangi	48 00	52 20	Growler.
75	do.	do.	47 26	52 35	Scattered pieces field ice.
76	do.	Hydro	47 33	50 54	Do.
77	do.	do.	47 45	49 28	60 percent cover.
78	Mar. 23	do.	Southern two thirds Strait of Belle Isle.		90 percent cover.
79	do.	do.	Northern one third Strait of Belle Isle.		Berg.
80	do.	do.	48 24	51 54	Do.
			50 25	52 55	Do.
			52 40	53 16	Do.
			North and west of a line from		
			48 15	52 05	
			48 45	51 20	
			48 55	51 10	
			49 50	51 33	
			50 04	52 00	
81	do.	do.	50 45	52 05	Field ice limits.
			51 03	51 00	
			51 20	50 40	
			52 00	51 35	
			52 30	52 30	
			52 45	52 00	
82	do.	USCGC Spencer	47 37	50 05	One piece field ice.
			47 40	51 20	
83	do.	Clary Thorden	47 55	50 40	Heavy field ice.
84	do.	USCGC Bibb	47 55	49 26	Scattered field ice.
85	do.	USCGC Spencer	47 56	49 12	Do.
86	do.	MATS plane	50 00	49 36	Field ice.
87	do.	Hydro	50 35	50 35	Belt field ice.
88	do.	do.	50 45	50 00	Do.
89	Mar. 24	Ice Patrol plane	47 55	51 36	Small berg.
90	do.	do.	47 57	52 17	Medium berg.
91	do.	TWA plane	50 00	46 30	1 large, 1 small berg.
92	do.	MATS plane	50 00	49 51	Berg.
93	do.	Ice Patrol plane	47 55	52 14	Growler.
94	do.	do.	48 02	51 40	Do.
95	do.	do.	48 03	51 53	Do.
96	do.	do.	48 14	51 47	Do.
97	do.	do.	48 36	51 45	Do.
98	do.	do.	48 42	51 46	Do.
			North of a line from		
			47 55	51 55	
			47 50	49 40	
99	do.	do.	47 20	49 40	Scattered to heavy field ice.
			47 20	50 20	
			thence northward.		

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
100	Mar. 24	Texas	47 36	49 36	Field ice.
101	do	Canadian Department of Transport.	47 40	60 45	Do.
102	do	Texas	47 54	49 06	Do.
103	do	USNS Sgt. Jonah E. Kelley.	48 13	59 10	Do.
104	do	Canadian Department of Transport.	48 15	59 20	Field ice limits.
105	do	do	47 40	60 45	Do.
106	do	do	5 to 15 miles off Money Point to Point Aconi.		Close pack.
107	do	do	Sydney Harbor		Scattered drift ice.
108	do	do	Sydney to Gabarus Bay Inlets.		Navigable drift.
109	do	do	George Bay to East Point, P. E. I.		Loose drift.
110	do	do	48 45	62 30	Clear.
111	Mar. 25	USCGC Campbell	47 50	49 22	Widely scattered small pieces field ice.
112	do	Vistafjord	48 00	50 30	Scattered heavy pieces field ice.
113	do	Mormaelm	48 15	50 00	Small pieces field ice.
114	do	Vistafjord	48 01	49 46	Heavy piece field ice.
115	do	do	48 37	49 42	Do.
116	do	Hydro	48 38	49 40	Loose slob ice.
117	Mar. 26	USNS Col. William J. O'Brien.	St Paul Island, south shore.		Growler.
118	do	St. Johns Radio	1 mile east of St. Johns Harbor entrance.		Large growler.
119	do	Canadian Department of Transport.	1 and 1/2 miles off St. Johns Harbor entrance.		Large ice field.
120	do	do	Eastern point lies at 47 52	60 25	Close pack ice.
121	do	do	Northumberland Strait.		Do.
122	do	do	From Cape North to Point Aconi and 20 miles seaward.		25 percent close pack ice, 20 miles long.
123	do	do	Between 7 and 27 miles northeast of Flat Point.		Widely scattered heavy field ice.
124	Mar. 27	Sangara	From 20 miles northeast of Bird Rocks to Gaspé Passage.		Berg (same as No. 90).
125	do	Fort Hamilton	Bearing 055 degrees distance 6.5 miles from Cape Spear.		Large berg (same as No. 124).
126	do	do	47 28	52 34	Several small growlers.
127	do	Sangara	From 47 28	52 34	Several growlers.
128	do	USNS Sgt. Jonah E. Kelley.	47 23	52 34	Strip field ice 600 yards long
129	Mar. 28	Canadian Department of Transport.	46 09	59 33	North and east limits of field ice in Cabot Strait.
130	do	do	5 miles north of North Cape to 47 40	60 10	60 percent cover, field ice.
131	do	do	48 10	61 20	Outside limits of ice fields, 60 percent cover.
132	do	do	20 miles off west coast Cape Breton to 47 10	61 20	Continuous field heavy loose drift ice 3 to 10 miles wide.
133	do	do	20 miles north of North Point P. E. I. to 47 55	62 30	Full of close pack ice.
			to Dead Man Island to 46 50	62 35	
			Cape Breton.		
			From West Point, P. E. I. to a point 20 miles off North Point, P. E. I.		
			Egmont Bay		

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
134	Mar. 28	Canadian Department of Transport.	Summerside harbor and entrance.		Closed.
135	do.	do.	Island side of Cabot Strait		Continuous loose drift ice 2 to 8 miles wide. Sonar contact, probable berg.
136	Mar. 29	USCGC Spencer	50 17	48 00	Berg, growler, loose floe ice.
137	do.	Arctic Prowler	50 40	54 35	Growler.
138	do.	St. Johns Radio	47 40	52 28	String close ice 5 miles wide.
139	do.	Cabot Strait	46 30	59 46	Large body field ice.
140	do.	do.	Westward between Cape Smoky and St. Paul Island.		
141	Mar. 30	Caxton	47 13	51 44	Berg (same as No. 125).
142	do.	Ice Patrol plane	47 14	51 44	Small berg (same as No. 141).
143	do.	do.	47 26	52 38	Small berg.
144	do.	do.	47 47	50 33	Do.
145	do.	do.	47 52	52 12	Do.
146	do.	do.	47 55	51 55	Do.
147	do.	do.	48 04	51 53	Do.
148	do.	do.	48 08	51 48	Do.
149	do.	do.	48 08	52 06	Do.
150	do.	Arctic Prowler	49 30	53 05	Berg.
151	do.	do.	50 06	53 51	Do.
152	do.	do.	50 40	54 35	Do.
153	do.	Caxton	47 09	51 27	Small growler.
154	do.	do.	47 11	51 32	Do.
155	do.	do.	47 12	51 28	Do.
156	do.	Ice Patrol plane	47 13	51 32	Growler.
157	do.	Caxton	47 14	51 52	Small growler.
158	do.	Ice Patrol plane	47 17	51 34	Growler.
159	do.	do.	47 18	51 36	Do.
160	do.	Caxton	47 19	51 49	Small growler.
161	do.	do.	47 20	51 50	Do.
162	do.	Ice Patrol plane	47 24	51 04	Growler.
163	do.	Caxton	47 26	51 39	Small growler.
164	do.	do.	47 27	51 39	Do.
165	do.	Ice Patrol plane	47 37	50 58	Growler.
166	do.	do.	47 39	52 01	Do.
167	do.	do.	47 40	50 53	Do.
168	do.	do.	47 40	51 29	Do.
169	do.	do.	47 40	51 31	Do.
170	do.	do.	47 40	51 41	Do.
171	do.	do.	47 47	51 46	Do.
172	do.	do.	47 47	51 52	Do.
173	do.	do.	47 48	51 41	Do.
174	do.	do.	47 50	52 04	Do.
175	do.	do.	47 52	51 46	Do.
176	do.	do.	47 53	50 41	Do.
177	do.	do.	47 53	52 20	Do.
178	do.	do.	47 57	51 51	Do.
179	do.	do.	47 57	52 31	Do.
180	do.	do.	48 01	52 07	Do.
181	do.	do.	48 03	52 28	Do.
182	do.	do.	48 05	51 06	Do.
183	do.	do.	48 08	51 09	Do.
184	do.	do.	48 08	52 22	Do.
185	do.	do.	48 09	50 59	Do.
186	do.	do.	48 12	52 18	Do.
187	do.	do.	48 17	52 16	Do.
188	do.	do.	48 21	52 08	Do.
			North of a line from Bacaleicu Island to		Scattered to heavy field ice.
			48 00	49 00	
			48 30	48 50	
			48 50	48 50	
			from		Strings loose floe ice.
			50 40	54 35	
			49 30	53 05	
			47 23	52 42	
191	Mar. 31	Nova Scotia	47 23	52 42	Small berg.
192	do.	Fort Hamilton	47 23	52 42	Small berg (same as No. 191).
193	do.	Nova Scotia	47 24	52 31	Small berg (same as No. 143).
194	do.	do.	47 33	52 29	Berg and growlers.
195	do.	do.	47 39	52 36	Two bergs.
196	do.	do.	47 19	52 27	Large growler.
197	do.	Fort Hamilton	47 26	52 31	Growler.
198	do.	do.	47 33	52 29	Do.
199	do.	do.	47 45	52 30	Do.
200	do.	do.	47 45	52 29	Do.
201	do.	do.	47 52	52 37	Do.
202	Apr. 1	USN plane	47 13	52 48	Small berg (same as No. 191).

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
203	Apr. 1.	Nova Scotia	47 25	51 37	Berg (same as No. 146).
204	do	do	47 32	52 30	Berg (same as No. 194)
205	do	Ice Patrol plane	48 04	53 06	Small berg.
206	do	do	48 21	52 44	Do.
207	do	do	48 32	52 24	Medium berg.
208	do	do	48 33	52 53	Small berg.
209	do	do	48 54	51 33	Medium berg.
210	do	do	48 56	52 44	Do.
211	do	do	48 57	51 40	Small berg.
212	do	do	48 59	52 45	Medium berg.
213	do	do	49 00	51 03	Small berg.
214	do	do	49 02	51 48	Do.
215	do	do	49 03	51 46	Do.
216	do	do	49 08	50 43	Do.
217	do	do	49 38	53 05	Do.
218	do	do	49 41	53 00	Do.
219	do	do	49 53	52 56	Do.
220	do	do	49 55	52 58	Medium berg.
221	do	do	50 03	52 33	Do.
222	do	USN plane	50 10	53 50	Berg.
223	do	Ice Patrol plane	50 16	52 39	Small berg.
224	do	do	48 08	52 59	Growler.
225	do	do	48 13	52 58	Do.
226	do	do	48 53	51 20	Do.
227	do	do	48 57	51 18	Do.
228	do	do	49 03	51 21	Do.
229	do	do	49 06	51 18	Do.
230	do	do	Between Baccalieu Island and Cape Bonavista and extending westward to 48 16 | 53 14 West of a line from 48 50 | 51 20 to 48 52 | 51 40 to 50 30 | 51 10		Close pack ice.
231	do	do	Scattered to close pack ice.		
232	do	Nova Scotia	47 53	48 56	Scattered field ice.
233	do	do	47 54	48 20	Light strings field ice.
234	do	do	47 56	48 35	Strings heavy field ice.
235	do	do	47 56	48 38	Do.
236	do	do	47 56	48 48	Strings field ice.
237	do	do	48 02	47 49	Do.
238	do	do	48 03	47 46	Light strings field ice.
239	do	Canadian Department of Transport.	On west and east coasts of Cape Breton Island from East Point to St. Paul Island to 47 10 | 59 30 46 20 | 59 10 45 50 | 59 30 to Cape Breton. Eastward from Cape North to 46 45 | 59 30 to Flint Island to Scatari Light to 45 45 | 59 25 to 45 45 | 59 40 to 10 miles off Louisburg Light. 45 40 | 59 50		Heavy field ice.
240	Apr. 2	do	Heavy drift ice.		
241	Apr. 3	Berylstone	45 40	59 50	Heavy string field ice, 10 miles long, 1 mile wide.
242	Apr. 4	Comandante Tenreiro	46 40	51 41	Berg (same as No. 142).
243	do	Irmingard	46 40	51 42	Berg (same as No. 242).
244	do	do	46 52	51 32	Berg (same as No. 203).
245	do	Comandante Tenreiro	46 59	51 30	Berg (same as No. 244).
246	do	Ice Patrol plane	46 56	52 36	Small berg.
247	do	do	47 02	52 32	Do.
248	do	do	47 04	52 30	Do.
249	do	do	47 20	52 44	Do.
250	do	do	47 40	50 47	Large berg.
251	do	do	47 57	52 47	Small berg.
252	do	do	48 08	52 23	Do.
253	do	do	48 12	52 27	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
254	Apr. 4	Ice Patrol plane	46 55	52 15	Growler.
255	do	do	46 56	51 28	Do.
256	do	do	47 00	51 26	Do.
257	do	do	47 10	52 36	Do.
258	do	do	47 12	49 47	Do.
259	do	do	47 16	49 46	Do.
260	do	do	47 26	52 39	Do.
261	do	do	47 36	49 56	Do.
262	do	do	47 50	50 04	Do.
263	do	Torr Head	46 43	47 22	Scattered heavy pieces field ice.
			North and west of a line from Motion Head to		
264	do	Ice Patrol plane	46 45	50 55	Scattered to heavy field ice.
			48 30	50 05	
			thence north.		
265	do	Irmingard	46 55	51 10	Field ice.
			46 57	50 58	
			47 10	48 50	
266	do	Ice Patrol plane	47 25	47 27	
267	do	Canadian Department of Transport.	Along east coast Cape Breton Island from Michaux Point to Scatari Island and 6 miles seaward.		Continuous strings field ice.
268	do	do	Along east coast Cape Breton Island from Scatari Island to Flat Point and 1 to 5 miles seaward.		
269	do	do	Along east coast Cape Breton Island from Flat Point 12 miles northeastward.		Loose drift ice.
270	do	do	Along east coast Cape Breton Island from Ciboux Island to Cape North.		Narrow strip close pack ice.
271	do	do	Along west coast Cape Breton Island from 6 miles off Cape North to		Close pack ice.
			46 17	61 58	
272	do	do	Along west coast Cape Breton Island from		Continuous loose drift ice.
			46 17	61 58	
273	do	do	Cape George. Mainland side of Northumberland Strait from Ahmet Shoals to Cape George.		Loose drift ice.
274	Apr. 5	Ice Patrol plane	47 32	52 19	Small berg.
275	do	do	47 33	50 22	Medium berg (same as No. 250).
276	do	do	47 49	52 14	Small berg.
277	do	do	47 52	52 25	Do.
278	do	do	47 55	52 27	Do.
279	do	do	47 59	52 22	Do.
280	do	do	48 05	52 06	Do.
281	do	do	48 11	52 08	Do.
282	do	Hydro	48 57	51 07	Berg.
283	do	do	49 21	51 30	Do.
284	do	do	49 40	52 25	3 bergs.
285	do	do	50 07	54 10	Berg.
286	do	do	50 09	53 43	Do.
287	do	do	50 10	53 05	Do.
288	do	do	50 25	54 55	Do.
289	do	do	51 00	55 20	3 bergs.
290	do	do	51 54	54 47	Berg.
291	do	do	52 10	54 58	Do.
292	do	do	52 12	55 20	Do.
293	do	do	52 25	54 05	Do.
294	do	do	52 32	54 45	Do.
295	do	do	52 40	55 30	3 bergs.
296	do	do	52 45	54 45	Berg.
297	do	do	54 13	54 28	Do.
298	do	do	54 27	55 05	Do.
299	do	do	54 28	54 37	Do.
300	do	do	54 41	56 35	Do.
301	do	do	55 17	55 35	Do.
302	do	do	55 20	58 20	Do.
303	do	do	55 25	57 32	Do.
304	do	do	55 39	57 25	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
305	Apr. 5	Ice Patrol plane	46 23	51 59	Growler.
306	do	do	46 34	51 43	Do.
307	do	do	47 01	51 43	Do.
308	do	Irmingard	47 08	49 58	2 growlers.
309	do	Ice Patrol plane	Within 20 miles east coast Avalon Peninsula between Cape Race and Cape Spear.		Several growlers.
310	do	do	Motion Head to		Moderate to heavy concentrations field ice.
			47 30	50 30	
311	do	USNS Golden Eagle	to		Belt of field ice 5 miles wide.
			49 00	50 40	
312	do	USNS Pvt. Jose F. Valdez.	Northward from		Field ice.
			45 55	47 20	
313	do	Canadian Department of Transport.	From Motion Head 5 miles south and 3 to 7 miles offshore.		Heavy drift ice.
314	do	do	From Cape North to		Continuous field loose drift ice.
			47 03	59 54	
315	do	do	Along east coast Cape Breton Island from Fourchu Light to Seatar Island.		Narrow strip close pack ice.
			Along east coast Cape Breton Island from Cape Morien to Ciboux Island to Cape North.		
316	do	do	Along west coast Cape Breton Island from Cape North to		Loose drift ice.
			46 12	61 58	
317	do	do	to		Line of loose drift ice.
			George Bay		
318	do	do	Along Nova Scotia coast from Cape George to Wallace Harbor.		Loose drift ice.
319	do	do	Western end of Northumberland Strait.		Continuous field loose drift ice.
320	Apr. 6	Ice Patrol plane	46 54	52 47	Small berg (same as No. 246).
321	do	do	47 09	52 49	Small berg (same as No. 248).
322	do	do	47 32	52 24	Small berg (same as No. 251).
323	do	do	47 35	53 04	Small berg.
324	do	do	47 36	52 26	Small berg (same as No. 276).
325	do	do	47 36	52 30	Small berg (same as No. 277).
326	do	do	47 37	50 43	Berg (same as No. 275).
327	do	do	47 47	52 32	Small berg.
328	do	do	47 51	52 27	Do.
329	do	Mormacpine	45 47	48 34	Stationary radar target possible growler.
330	do	Ogna County	46 09	51 21	2 growlers.
331	do	Kristina Thorden	46 10	53 24	Growler.
332	do	Ogna County	46 12	52 00	Do.
333	do	Ice Patrol plane	47 03	52 40	Do.
334	do	do	47 05	52 38	Do.
335	do	do	47 06	51 18	Do.
336	do	do	47 14	51 35	Do.
337	do	do	47 18	52 14	Do.
338	do	do	Along east coast Avalon Peninsula from Motion Head to Baccalieu Island and 2 to 5 miles seaward.		Close pack ice.
339	do	do	Motion Head to		Light to heavy concentration field ice.
			47 15	51 20	
340	do	do	to		Widely scattered large pieces field ice.
			47 50	51 00	
341	do	Italia	West of a line from		Field ice.
			46 50	51 20	
342	do	Canadian Department of Transport.	to		Continuous slob ice.
			47 40	50 50	
343	do	do	46 07		Close pack ice.
			46 09	47 24	
			Along east coast Cape Breton Island from Fourchu Light to Seatar Island.		
			Along east coast Cape Breton Island from Flint Island to Flat Point.		

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
344	Apr. 6	Canadian Department of Transport.	Along east coast Cape Breton Island from Point Aconi to Cape North.		Continuous loose drift ice.
345	..do.	..do.	Along west coast Cape Breton Island from Cape North to Cape George.		Continuous field loose drift ice.
346	..do.	..do.	Southern side of Northumberland Strait from Cape George to Pugwash.		Continuous loose drift ice.
347	Apr. 7	USCGC Duane	47 33	50 30	Berg (same as No. 326).
348	..do.	Kristina Thorden	46 09	51 27	Growler.
349	..do.	..do.	46 09	52 05	Do.
350	..do.	City of Perth	46 16	51 08	Do.
351	..do.	Brangajoeokull	46 22	52 52	Do.
352	..do.	Ogna County	46 25	53 19	Do.
353	..do.	USCGC Duane	46 40	50 58	Scattered pieces field ice.
354	..do.	..do.	47 55	50 07	Do.
355	Apr. 8	Esbjorn Gorthon	46 20	55 14	Growler.
356	..do.	..do.	46 28	55 37	3 unidentified radar targets, probable growlers.
			Along coast Cape Breton Island from 5 miles off Scatari Island to		
			46 25	59 25	
			to		
357	..do.	Canadian Department of Transport.	47 10	59 40	Scattered fields heavy drift ice.
			to		
			47 15	60 55	
			to		
			46 25	61 40	
			to		
358	..do.	..do.	George Bay		Light to heavy concentrations drift ice.
			Northumberland Strait		
359	..do.	..do.	From 10 miles east of Tracadie to 5 miles off Cape d'Espair.		Continuous field drift ice.
360	Apr. 9	Newfoundland	47 17	51 30	Widely scattered small pieces field ice.
361	..do.	..do.	47 17	51 52	Scattered heavy pieces field ice.
362	..do.	USCGC Campbell	49 03	49 57	Scattered pieces field ice.
363	Apr. 10	USNS Sgt. Jonah E. Kelley.	47 20	52 43	Berg (same as No. 274).
364	..do.	..do.	47 12	52 42	Growler.
365	..do.	..do.	47 17	52 40	Do.
366	..do.	..do.	46 45	53 00	Do.
367	..do.	Newfoundland	From a point 2 miles outside St. Johns to		Open pack ice, occasional growlers.
			47 22	52 36	
368	..do.	USNS Sgt. Jonah E. Kelley.	2 miles off North Head St. Johns Harbor.		Heavy concentrations field ice with scattered growlers.
369	..do.	Newfoundland	Between Ferryland Head and Cape Race.		Many single pieces rafted slob ice.
370	..do.	USCGC Campbell	46 33	53 40	Widely scattered field ice.
371	..do.	USNS Sgt. Jonah E. Kelley.	Along east coast of Newfoundland from Cape Race to Cape Neddick.		Loose concentrations field ice.
372	..do.	..do.	Along east coast of Newfoundland from Cape Neddick to Motion Head.		Moderate concentrations field ice.
373	..do.	Hydro	St. Johns Harbor		Field ice moving into harbor.
374	..do.	Newfoundland	47 16	52 39	Brash ice.
375	..do.	USCGC Campbell	48 50	50 01	Do.
376	Apr. 11	Ice Patrol plane	47 33	50 30	Medium berg (same as No. 347).
377	..do.	Hydro	47 50	52 43	Berg.
378	..do.	..do.	47 58	52 41	Do.
379	..do.	..do.	48 06	52 43	Do.
380	..do.	..do.	48 07	53 20	Do.
381	..do.	..do.	48 21	52 50	Do.
382	..do.	..do.	48 30	52 56	Do.
383	..do.	Ice Patrol plane	47 02	52 37	Growler.
384	..do.	..do.	47 04	52 35	Do.
385	..do.	..do.	47 28	50 27	Do.
386	..do.	Hydro	Outside St. Johns Harbor		Many growlers.
387	..do.	..do.	47 40	52 38	Growler.
388	..do.	..do.	47 50	52 57	Do.
389	..do.	..do.	47 52	53 35	Do.
390	..do.	..do.	48 07	53 28	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
391	Apr. 11	Ice Patrol plane	o / 47 20	From 52 45	Moderate to heavy concentrations field ice
			to 48 10	48 50	
			to 48 40	48 50	
392	do	Hydro	St. Johns Harbor		60 percent cover.
393	do	do	St. Johns Harbor and outer harbor extending seaward 5 miles.		100 percent block floe.
394	do	Ice Patrol plane	47 40	48 05	Widely scattered small pieces field ice.
395	do	do	48 12	48 15	Do.
396	do	Canadian Dept. of Transport.	20 miles south Cape Race to Father Point.		Occasional heavy pieces and strings.
397	do	do	Northumberland Straits from Point Prim to Woods Island to East Point.		Isolated pieces field ice.
398	do	do	Indian Rocks		Large piece field ice aground.
399	do	do	5 miles northwest of Cape George towards Pictou Island.		Large field 1 to 5 miles wide, 15 miles long.
400	do	Ice Patrol plane	West Northumberland Straits and Chaleur Bay.		Several isolated fields.
401	do	do	West coast Cape Breton Island.		Field ice.
402	Apr. 12	do	46 50	52 46	Small berg (same as No. 363).
403	do	do	46 32	53 12	Growler.
404	do	do	46 32	53 08	Do.
405	do	do	46 58	52 17	Do.
406	do	do	47 07	52 36	Do.
407	do	do	Along east coast Avalon Peninsula between latitudes 46 55N and 47 20N and 3 to 10 miles seaward.		Scattered strings to close pack field ice.
408	do	Cortona	46 20	47 34	Large patches brash ice.
409	do	Hydro	St. Johns Harbor		100 percent rafted field ice.
410	do	Canadian Department of Transport.	Along shoreline east coast Cape Breton Island.		Slob ice.
411	do	do	Along west coast Cape Breton Island from 15 miles below Cape St. Lawrence to Inverness and 5 to 10 miles seaward.		Loose drift ice.
412	do	do	Northumberland Strait		Scattered fields loose drift ice.
413	Apr. 13	USNS Sgt. Jonah E. Kelley.	47 25	52 42	Berg (same as No. 377).
414	do	do	47 29	52 39	Berg (same as No. 378).
415	do	do	47 34	52 38	Berg.
416	do	North Coaster	Along east coast Avalon Peninsula at latitude 46 50N		Several growlers.
417	do	USNS Sgt. Jonah E. Kelley.	Along east coast Avalon Peninsula and 5 miles seaward.		Widely scattered growlers.
418	do	Chepman	From 46 16	52 59	Heavy field ice.
			northeastward and north-northwestward.		
			From 46 19	52 58	
419	do	USCGC Mackinac	to Cape Race.		Field ice.
420	do	USN plane	From 24 miles south of Cape Pine extending northeast.		Pack ice.
421	do	Fort Avalon	Along east coast Avalon Peninsula 2 miles offshore.		Field ice.
			Along east coast Avalon Peninsula east of a line from Cape Spear to		
422	do	USNS Sgt. Jonah E. Kelley.	47 27	52 32	Field ice.
			to 47 20	52 40	
423	do	North Coaster	Along east coast Avalon Peninsula from Cape Ballard 7 miles east-northeast.		Heavy strings field ice.
424	do	Hydro	St. Johns Harbor		60 to 70 percent cover field ice.
425	do	Canadian Department of Transport.	West coast Cape Breton Island from Pleasant Bay to Sea Wolf Island.		Narrow band close pack ice.
426	do	do	Northumberland Strait		Scattered patches loose drift ice.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
427	Apr. 14	Ice Patrol plane	46 36	52 40	Small berg (same as No. 402).
428	do	do	46 54	52 21	Small berg (same as No. 322).
429	do	do	47 22	52 42	Small berg (same as No. 413).
430	do	do	47 28	52 38	Small berg (same as No. 414).
431	do	do	47 38	52 37	Small berg (same as No. 415).
432	do	do	48 02	52 40	Small berg.
433	do	do	48 04	52 32	Small berg.
434	do	do	48 10	52 30	Small berg.
435	do	USCGC Mackinac	46 13	51 50	Growler.
436	do	Fort Hamilton	7 miles off east coast Avalon Peninsula between Cape Spear and Cape Race.		Field ice.
			Along east coast Avalon Peninsula from 2 miles offshore at Cape Spear to 12 miles offshore at Cape Race and extending south to		Tongue of field ice with scattered growlers.
437	do	Ice Patrol plane	46 00	53 20	
438	do	do	Between Cape St. Francis and Baccalieu Island and seaward.		Close pack field ice.
439	do	Sun Valley	From		Field ice.
			46 57	60 10	
			to		
			47 09	60 10	
440	Apr. 15	USNS Col. William J. O'Brien	46 55	52 49	Grounded ¹ berg (same as No. 428).
441	do	Mormacoak	46 11	59 42	Small floe.
442	do	Hydro	South and west of a line from		Heavy field ice.
			50 03	53 30	
			to		
			50 20	55 46	
			to		
			50 30	55 40	
			to northwest tip of Groats Island.		
443	do	do	Along northeast Coast of Newfoundland from 7 miles offshore at latitude 51 00N to 3 miles offshore at Great Harbour Deep.		Do.
444	do	do	Straits of Belle Isle from Armour Point to Battle Harbour and 0 to 15 miles offshore.		Do.
			From Cape Bauld to		Do.
			51 10	55 05	
			to		
			51 40	54 40	
			to		
445	do	do	53 10	54 45	
			to		
			54 12	56 13	
			to Goose Bay.		
446	Apr. 16	Vista fjord	45 24	47 10	2 growlers.
447	do	Dundee	45 45	51 26	Padar target, probable berg.
448	Apr. 17	Tidaholm	46 00	53 01	Flat berg (same as No. 427).
449	do	Arosa Kolm	46 11	54 22	3 growlers.
450	do	Angusbrae	45 32	53 13	Pieces of field ice.
451	do	Tidaholm	46 56	53 34	Field ice.
			to		
			45 56	53 16	
452	do	Arosa Kolm	46 04	54 18	Large patch field ice.
453	Apr. 18	USN plane	45 10	52 45	Berg.
454	do	Olympia	45 27	52 37	Berg (same as No. 453).
455	do	Arosa Kolm	45 47	52 01	Berg.
456	do	Hydro	7 miles east Cape Bonavista.		2 bergs.
457	do	Grootebeer	45 20	53 55	4 small growlers.
458	do	Arosa Kolm	45 50	53 25	Several growlers.
459	do	Columbia	45 55	50 57	Growler.
460	do	USCGC Yakutat	46 03	51 00	2 growlers.
461	do	do	46 05	52 44	Growler.
462	do	Fort Hamilton	46 10	54 24	Do.
463	do	do	46 15	54 10	Do.
464	do	USCGC Yakutat	46 17	52 44	Do.
465	do	Ice Patrol plane	46 20	52 58	Do.
466	do	do	46 26	52 51	Do.
467	do	do	46 30	53 00	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
468	Apr. 18	Ice Patrol plane	46 35	52 52	Growler.
469	do	do	46 40	52 53	Do.
470	do	do	46 55	52 50	Do.
471	do	do	47 15	52 40	Do.
472	do	do	47 23	52 40	Do.
473	do	do	46 10	From 53 00	String heavy field ice ½ mile wide.
			to 47 00	52 50	
474	do	do	47 00	From 52 50	Field ice limits.
			to 47 40	52 00	
475	do	do	From Cape Race to 46 40	51 30	Limits widely scattered field ice.
			thence north		
476	do	do	Between string field ice and Avalon Peninsula.		Many large ice floes.
477	do	USN plane	45 10	52 45	Scattered drift ice.
478	do	Arosa Star	45 49	52 35	Drift ice.
479	do	USCGC Yakutat	46 05	52 43	Ice floes.
480	do	do	46 12	52 42	Field ice.
481	do	Fort Hamilton	46 16	53 40	Scattered field ice.
482	Apr. 19	Ice Patrol plane	45 15	52 22	Small berg (same as No. 454).
483	do	Manchester Spinner	45 20	52 18	Small berg (same as No. 482).
484	do	Ice Patrol plane	45 47	53 13	Small berg.
485	do	Monsoon	46 04	51 05	Berg.
486	do	Ice Patrol plane	46 45	52 53	Medium berg (same as No. 440).
487	do	do	47 04	52 42	Small berg.
488	do	Fort Hamilton	47 13	52 43	Berg (same as No. 429).
489	do	Ice Patrol plane	47 27	52 40	Small berg (same as No. 429).
490	do	Marengo	45 25	52 15	Radar target, probable berg.
491	do	Torsholm	45 26	54 11	Growler.
492	do	Monsoon	46 04	50 41	Do.
493	do	Marengo	45 50	50 48	Unidentified radar target, probable growler.
494	do	Ice Patrol plane	From 6 miles off Cape Spear to 46 10	53 00	Tongue of heavy field ice.
			Inshore of a line from Cape St. Mary to 46 00	54 40	
			to 45 10	54 15	
			to 45 10	53 10	
495	do	do	46 20	to 51 40	Widely scattered field ice.
			to 47 30	51 40	
496	do	Lismoria	45 12	53 20	Scattered pieces field ice.
497	do	Classic	45 23	54 12	Scattered field ice.
498	do	Lismoria	45 26	54 00	Scattered pieces field ice.
499	do	Beaverlglen	45 26	53 29	Large piece field ice.
500	do	do	45 30	53 29	Do.
501	do	L'Aventure	46 23	From 51 45	Scattered pieces field ice.
			to 46 55	51 45	
502	Apr. 20	Trolleholm	45 09	52 00	Berg (same as No. 483).
503	do	do	45 53	50 25	Growler.
504	do	Empress of Scotland	46 08	53 01	Do.
505	do	do	46 09	52 59	Do.
506	do	do	46 10	52 54	Do.
507	do	L'Aventure	46 10	54 20	Do.
508	do	Empress of Scotland	46 14	53 27	Do.
509	do	do	North of a line from 46 09	52 08	Scattered field ice.
			to 46 08	52 47	
510	do	do	45 56	From 52 21	String of scattered field ice.
			to 46 23	52 12	
511	do	do	46 09	From 52 34	String of heavy field ice.
			north-northeastward.		
512	do	do	46 08	52 45	String of field ice.
			north-northeastward.		

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
513	Apr. 20	Hydro.....	From 5 miles offshore at Cape St. Francis and extending eastward 10 miles to ½ mile offshore at Cape Spear and extending eastward 5 miles.		Field ice.
514	do	do	In Conception Bay south and east of a line from Baccalieu Island to 3 miles west of Cape St. Francis to Harbour Grace.		Do.
515	Apr. 21	Tramontana.....	45 50	53 53	Berg.
516	do	St. Cerque.....	45 56	50 24	Berg (same as No. 485).
517	do	Newfoundland.....	46 50	52 44	Berg (same as No. 486).
518	do	do	46 56	52 50	Berg (same as No. 487).
519	do	Invicta.....	45 38	52 41	Scattered growlers.
520	do	Ogna County.....	45 52	52 49	Growler.
521	do	St. Michael.....	46 20	52 14	Scattered growlers.
522	do	do	46 21	52 25	Growler.
523	do	Newfoundland.....	46 37	52 57	Do.
524	do	do	46 54	52 49	Do.
525	do	Ogna County.....	North from 45 40	52 00	Field ice.
			East of a line from 46 56	52 43	
526	do	Newfoundland.....	47 19	52 38	Heavy field ice.
			thence northward.		
527	Apr. 22	Ogna County.....	45 38	50 04	Berg (same as No. 516).
528	do	Nova Scotia.....	46 51	52 49	Berg (same as No. 517).
529	do	North Britain.....	46 52	52 50	Radar target, probable berg (same as No. 528).
530	do	Newfoundland.....	46 52	52 51	Berg (same as No. 529).
531	do	Fort Hamilton.....	46 53	52 50	Berg (same as No. 530).
532	do	Nova Scotia.....	46 53	52 48	Berg (same as No. 518).
533	do	Fort Hamilton.....	46 54	52 49	Berg (same as No. 532).
534	do	North Britain.....	46 54	52 49	Radar target, probable berg (same as No. 533).
535	do	Newfoundland.....	46 54	52 50	Berg (same as No. 534).
536	do	Capetan Ilias.....	47 10	50 11	Berg (same as No. 376).
537	do	Ice Patrol plane.....	47 10	50 11	Berg (same as No. 536).
538	do	do	Within 10 miles of the east coast Avalon Peninsula between Cape St. Francis and Ferryland Head.		5 small bergs, several growlers (same as Nos. 430, 489).
539	do	Lyngenfjord.....	45 24	52 15	Scattered growlers and heavy pieces field ice.
540	do	do	From 45 26	52 12	Many growlers.
			to		
541	do	Ogna County.....	45 26	51 48	Growler.
542	do	Stavangerfjord.....	45 38	50 04	Do.
543	do	Empress of France.....	45 50	52 26	Do.
544	do	do	46 06	51 40	Do.
545	do	do	46 07	51 47	Do.
546	do	do	46 11	52 24	Do.
547	do	do	46 13	52 34	Do.
548	do	do	46 13	52 45	Do.
549	do	do	46 14	52 47	Do.
550	do	Nova Scotia.....	46 15	52 51	Do.
			46 24	52 24	Do.
551	do	Newfoundland.....	From 46 33	52 22	Numerous growlers.
			to		
552	do	do	46 28	51 39	Growler.
553	do	do	46 33	52 21	Do.
554	do	Nova Scotia.....	46 39	52 52	Do.
			46 49	51 55	Do.
555	do	Newfoundland.....	From 47 31	52 32	String of growlers.
			to		
556	do	do	47 10	52 38	Do.
557	do	Nova Scotia.....	47 38	52 41	Scattered growlers and large pieces field ice.
			Along east coast Avalon Peninsula from Witless Bay to Cape Spear.		
558	do	do	47 34	52 32	Growler.
559	do	Ice Patrol plane.....	5 to 20 miles offshore east coast Avalon Peninsula from Cape St. Francis to south of limit of visibility at latitude 47 00N.		Tongue of close pack 5 to 30 miles wide.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
560	Apr. 22	Ice Patrol plane	Eastern half	Conception Bay	Close pack.
561	do	Stavanerfjord	45 47	51 34	Scattered pieces field ice.
562	do	do	45 55 46 00	51 53 51 55	Strings field ice.
563	do	Empress of France	46 11	52 23	Scattered pieces field ice.
564	do	North Britain	46 10	52 07	Field ice.
565	do	Hydro	Along east coast Avalon Peninsula at latitude 47 12N 10 miles off shore.		Heavy field ice.
566	do	do	In Conception Bay south of a line from Cape St. Francis to Carbonear Bay.		90 percent cover.
567	Apr. 23	Prins Alexander	45 23	49 51	Berg (same as No. 527).
568	do	Baskerville	45 31	50 52	Berg.
569	do	do	45 47	49 28	Small berg and growler.
570	do	Ivinghoe Beacon	45 49	49 36	Berg.
571	do	Neptunia	45 53	49 45	Berg (same as No. 570).
572	do	Baron Elibank	45 08	49 47	Growler.
573	do	Baskerville	45 30	50 47	Do.
574	do	Brangajokull	45 45	51 02	Numerous growlers.
575	do	Baskerville	45 48	49 34	Small growlers.
576	do	Neptunia	46 03	49 12	Growler.
577	do	Baskerville	45 30	50 52	4 small pieces of field ice.
578	do	do	45 47	49 37	2 small pieces of field ice.
579	Apr. 24	Avonwood	45 10	49 45	Berg (same as No. 567).
580	do	Elysia	45 12	49 42	Radar target, probable berg.
581	do	Geheimrat Sartori	45 52	49 42	Do.
582	do	Saxonia	45 59	49 40	Berg (same as No. 571).
583	do	USNS Pvt. Jose F. Valdez	46 25	52 55	Berg (same as No. 531).
584	do	Mormacelm	46 26	52 51	Berg (same as No. 583).
585	do	Sunbeam	47 05	50 10	Berg and growler (same as No. 537).
586	do	Montcalm	44 55	49 50	Radar target, probable berg.
587	do	Geheimrat Sartori	45 44	51 50	Growler.
588	do	do	45 46	51 09	Do.
589	do	do	45 49	51 14	Do.
590	do	Nova Scotia	4 miles south	Cape Race	Southern extent heavy but loosely packed field ice, with growlers in and around field ice.
591	do	Storfeld	6 miles north	Cape Race	Shore lead 1 mile wide, close pack.
592	do	Nova Scotia	From 5 miles off Bull Head to 4 miles off Renew's Head.		Numerous growlers.
593	do	do	From 4 miles off Renew's Head		Heavy but loosely packed field ice.
594	do	USNS Pvt. Jose F. Valdez	46 44	52 52	Heavy field ice closing shore lead.
595	do	Mormacelm	46 52	52 00	Tongue of field ice and scattered small growlers.
596	do	St. Johns Radio	St. Johns	Harbor approaches.	Ice tight to land.
597	do	Nova Scotia	From St. Johns		Loosely packed heavy strings and patches field ice.
598	Apr. 25	USCGC Evergreen	47 22	52 36	Berg.
599	do	Ice Patrol plane	46 16	53 08	Do.
600	do	USCGC Evergreen	48 47	53 22	Growler.
601	do	do	46 14	52 04	Do.
602	do	do	46 14	53 14	Do.
603	do	do	46 18	53 14	Do.
604	do	do	46 26	53 29	Tongue field ice.
605	do	Storfeld	46 19	53 27	Drift ice.
606	do	St. Johns Radio	Southwest Cape Race		Closed by heavy pack ice.
607	do	do	St. Johns Harbor entrance.		
608	do	do	West of a line from		
609	do	do	48 10	52 40	Scattered strings to heavy pack field ice.
610	do	do	48 40	52 20	
611	do	do	49 15	53 20	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
607	Apr. 26	Senhora do Mar	44 45	50 23	Berg.
608	do	Corthion	44 56	50 28	Berg (same as No. 607).
609	do	Beaverlake	45 09	51 15	Berg.
610	do	Captain Cook	45 10	51 10	Berg (same as No. 609).
611	do	Ice Patrol plane	45 33	50 20	Small berg (same as No. 582).
612	do	Captain Cook	45 37	49 39	Berg (same as No. 611).
613	do	Mapledell	45 17	53 17	Berg (same as No. 584).
614	do	Ice Patrol plane	46 25	50 38	Medium berg (same as No. 585).
615	do	do	46 25	50 50	Do.
616	do	do	46 40	53 00	Small berg.
617	do	L'Aventure	46 51	50 00	Berg (same as No. 614).
618	do	do	46 52	50 14	Berg (same as No. 615).
619	do	Ice Patrol plane	47 40	53 00	Small berg.
620	do	Beaverlake	45 37	49 47	Growler and 2 small pieces field ice.
621	do	Captain Cook	45 38	49 46	Growlers.
622	do	Triland	46 14	53 00	Loose concentrations field ice and scattered growlers.
623	do	Mapledell	46 17	53 27	Growlers.
624	do	Ice Patrol plane	46 27	53 00	Growler.
625	do	do	46 30	52 53	Do.
626	do	do	46 38	53 00	Do.
627	do	do	46 42	52 56	Do.
628	do	do	46 44	52 58	Do.
629	do	do	46 50	52 40	Do.
630	do	do	46 53	52 50	Do.
631	do	do	Motion Bay		Do.
632	do	do	46 30	From 53 30 to 52 50	Scattered strings field ice.
			46 30	From 52 50 to 52 40	
			46 30	to 52 40	
			46 40	to 52 30	
633	do	do	47 30	to 52 20	Scattered to close pack extending offshore from Cape Ballard.
			47 50	52 20	
634	do	do	Conception Bay		Close pack.
635	do	do	45 20	51 00	Two pieces field ice.
636	do	Mapledell	46 21	From 53 28 to 53 41	Brash ice.
			46 21	53 41	
637	Apr. 27	Ice Patrol plane	44 45	50 22	Berg (same as No. 608).
638	do	Triland	44 54	51 22	Berg (same as No. 610).
639	do	Antonio Pascoal	44 55	51 26	Berg (same as No. 638).
640	do	La Ensenada	45 39	52 52	Berg (same as No. 484).
641	do	Triland	46 16	53 31	Berg (same as No. 613).
642	do	USCGC Humboldt	46 20	53 46	Berg (same as No. 641).
643	do	Ice Patrol plane	46 29	50 10	Berg (same as No. 617).
644	do	do	46 34	50 28	Berg (same as No. 618).
645	do	do	46 30	to 53 40	Scattered to heavy field ice.
			46 20	52 30	
646	do	do	46 55	52 30	Do.
			47 20	52 30	
647	do	Triland	46 16	From 53 31 to 53 51	Close pack ice.
			46 18	54 08	
648	do	USCGC Humboldt	and northward.		Scattered field ice.
649	do	do	46 19	52 48	
650	Apr. 28	Empress of Australia	46 10	54 08	Patch scattered field ice.
651	Apr. 29	Kildale	44 59	51 07	Growler.
652	do	Joao Alvares Fagundes	46 33	50 45	Berg (same as No. 639).
653	do	Hydro	St. Johns Harbor approaches		Berg (same as No. 644).
654	Apr. 30	Blairspey	45 23	51 18	Pack ice.
655	do	Ice Patrol plane	47 37	52 37	Berg with numerous growlers (same as No. 651).
656	do	do	47 49	52 42	Small berg (same as No. 538).
657	do	do	46 45	53 47	Small berg.
658	do	do	46 45	53 50	Growler.
					Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude		West longitude		Description
			°	'	°	'	
			From	Cape	English	to	
			46	40	53	50	
				to			
			46	20	53	40	
				to			
			46	25	53	05	
				to			
			46	40	53	00	
				to			
659	Apr. 30	Ice Patrol plane-----	47	00	52	48	Scattered to close pack field ice.
				to			
			47	10	52	33	
				to			
			47	30	52	37	
				to			
			47	30	52	20	
				to			
			47	28	52	40	
660	May 1	Beaverglen-----	46	04	52	23	
				to			
			46	06	53	39	Scattered heavy pieces field ice.
661	do-----	Santa Irene-----	46	07	53	42	Heavy pieces field ice.
				From			
662	do-----	Beaverglen-----	46	08	53	50	Southern limit field ice.
				to			
			46	19	54	34	
663	do-----	USCGC Duane-----	46	23	53	55	Do.
664	do-----	do-----	46	30	52	54	Do.
665	May 2	Ice Patrol plane-----	44	36	51	28	Small berg (same as No. 654).
666	do-----	Cleopatra-----	44	51	51	42	Berg (same as No. 665).
667	do-----	Ice Patrol Plane-----	46	05	49	43	Small berg (same as No. 612).
668	do-----	Classic-----	45	09	50	00	Berg (same as No. 667).
669	do-----	Ice Patrol Plane-----	45	20	50	46	Medium berg (same as No. 666).
670	do-----	Stavangerfjord-----	45	28	50	51	Berg (same as No. 669).
671	do-----	Beaverglen-----	45	37	50	45	Berg (same as No. 670).
672	do-----	Ice Patrol plane-----	46	28	50	30	Medium berg (same as No. 652).
673	do-----	USNS Sgt. Jonah E. Kelley-----	46	29	54	03	Berg (same as No. 642).
674	do-----	Ice Patrol plane-----	46	30	53	43	Small berg (same as No. 673).
675	do-----	do-----	46	34	53	09	Small berg (same as No. 538).
676	do-----	do-----	46	36	53	06	Do.
677	do-----	USNS Sgt. Jonah E. Kelley-----	46	36	53	10	Berg (same as No. 675).
678	do-----	Ice Patrol plane-----	46	49	52	54	Small berg (same as No. 676).
679	do-----	North Britain-----	46	51	52	49	Berg (same as No. 678).
680	do-----	USNS Sgt. Jonah E. Kelley-----	46	51	52	50	Berg (same as No. 679).
681	do-----	North Britain-----	Off Fermuse Harbor-----				Berg (same as No. 680).
682	do-----	Hydro-----	Cape Freels-----				Many bergs.
683	do-----	do-----	Fogo Island to Orange Bay-----				Few bergs.
684	do-----	do-----	Cape Bauld to-----				Do.
			55	30	55	20	
685	do-----	Saxonia-----	44	33	52	17	Bergy bit.
686	do-----	Ice Patrol plane-----	44	39	50	12	Growler.
687	do-----	do-----	46	15	53	29	Do.
688	do-----	USNS Sgt. Jonah E. Kelley-----	47	00	52	46	2 growlers.
689	do-----	North Britain-----	Off Cape Race-----				5 growlers.
			North of a line from-----				
			46	03	53	50	
				to			
690	do-----	Ice Patrol plane-----	46	05	52	50	Scattered to heavy field ice and scattered growlers.
				to			
			46	28	52	33	
				From			
691	do-----	Ice Patrol plane-----	46	38	52	50	Narrow belt heavy field ice.
				to			
			47	05	52	43	
692	do-----	Tyrfjord-----	44	51	51	28	Ice field.
693	do-----	do-----	45	32	50	38	Do.
			South and east of a line from-----				
			46	40	52	50	
				to			
694	do-----	North Britain-----	46	15	53	35	Field ice with scattered field ice and growlers north of line.
				to			
			46	18	53	50	
695	do-----	USNS Sgt. Jonah E. Kelley-----	46	19	54	17	Scattered field ice with a few large growlers.
696	do-----	do-----	46	25	53	09	Edge of field ice.
697	do-----	do-----	From Cape Race to Cape St. Mary-----				Field ice and growlers.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
698	May 2	USNS Sgt. Jonah E. Kelley.	7 miles offshore between Cape Race and Cape Broyle.		Field ice.
699	do	North Britain.	8 miles off Cape Spear.		String brash ice.
700	do	Hydro.	Conception Bay south of a line from Bryants to Bauline.		Close pack ice.
701	do	do	47 50 | 52 40		Scattered to heavy strings field ice.
702	do	do	Trinity Bay south of a line from Irelands Eye to Grates Cove to north tip of Baccalieu Island.		Close pack ice with few bergs.
			48 38 | 52 53		
			Cape Bonavista to 48 40 | 53 25		
			49 25 | 52 52		
			49 50 | 54 00		
			50 13 | 54 52		
			50 15 | 55 30		
			50 32 | 56 02		
			southern tip Groais Island thence northern tip Groais Island		
			51 05 | 55 35		
703	do	do	51 10 | 55 05		Eastern boundary field ice.
			51 37 | 54 45		
			52 00 | 54 50		
			52 30 | 54 05		
			53 20 | 54 55		
			54 40 | 54 55		
			54 37 | 54 05		
			55 00 | 55 10		
			55 15 | 55 23		
			55 30 | 56 23		
704	May 3	Lousado	45 09 | 50 53		Berg (same as No. 671).
705	do	USCGC Evergreen.	46 26 | 50 45		Berg (same as No. 672).
706	do	Ice Patrol plane.	Torbay		Small berg.
707	do	do	47 42 | 52 55		Do.
708	do	do	47 42 | 52 57		Do.
709	do	do	47 43 | 52 38		Small berg (same as No. 656).
710	do	do	47 44 | 52 42		Small berg.
711	do	do	48 09 | 52 51		Do.
712	do	do	48 12 | 52 53		Do.
713	do	do	48 24 | 53 03		Do.
714	do	do	48 38 | 53 00		2 small bergs.
715	do	do	49 09 | 53 28		Small berg.
716	do	Hydro.	49 10 | 53 10		Many bergs.
			50 00 | 54 20		
717	do	Ice Patrol plane.	49 18 | 53 13		
718	do	do	49 18 | 53 20		
719	do	do	49 20 | 53 30		
720	do	do	49 23 | 53 32		
721	do	do	49 31 | 53 50		
722	do	do	49 36 | 53 55		
723	do	do	49 38 | 53 23		
724	do	do	49 45 | 53 52		
725	do	do	49 45 | 54 00		Do.
726	do	Hydro.	Along south shore of White Bay.		Few bergs.
727	do	do	Northwest tip St. Barbe Islands.		Do.
728	do	do	10 miles east of Groais Island.		Do.
729	do	do	51 15 | 55 20		Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
730	May 3	Maplecove	46 02	53 26	Growler.
731	do	do	46 02	53 38	Do.
732	do	Ice Patrol plane	47 42	52 57	Do.
733	do	do	48 00	53 20	Do.
734	do	do	48 03	53 16	Do.
735	do	do	48 07	53 06	Do.
736	do	do	48 09	52 50	3 growlers.
737	do	do	48 23	53 07	2 growlers.
738	do	do	48 28	52 57	Growler.
739	do	do	48 33	52 55	5 growlers.
740	do	do	48 40	53 12	Growler.
741	do	do	48 42	53 03	4 growlers.
742	do	do	49 13	53 27	Growler.
743	do	do	49 14	53 20	Do.
744	do	do	49 18	53 27	3 growlers.
745	do	do	Inside a line from Cape Fogo to Funk Island to Cape Freels.		20 growlers.
			From		
			46 10	52 54	
746	do	Assyria	46 01	53 09	Southern limits field ice.
			45 47	53 35	
			45 46	54 50	
747	do	Maplecove	45 55	53 13	Field ice.
			45 55	54 00	
748	do	do	46 02	53 26	Do.
			westward		
749	do	Hydro	47 31	52 31	Belt of close pack field ice.
			47 39	52 39	
750	do	Ice Patrol plane	Torbay		80 percent cover field ice.
751	do	do	Southern half Conception Bay.		Close pack field ice.
752	do	Hydro	Conception Bay south of a line from Bauline to Harbor Grace.		Do.
753	do	Ice Patrol plane	North of Cape St. Francis.		Strings of brash ice.
754	do	do	Trinity Bay		70 percent cover scattered to light pack ice.
755	do	Hydro	Trinity Bay north of a line from Grates Cove to Irelands Eye.		Light to moderate field ice.
756	do	Ice Patrol plane	East and north of Bacca-leu Island to 30 miles offshore.		Strings brash ice.
757	do	Hydro	East of a line from Grates Cove to Cape Bonavista and 5 to 12 miles seaward.		Scattered field ice.
			From		
			48 20	52 40	
758	do	Ice Patrol plane	49 10	53 00	Scattered pieces and loose brash ice.
			49 40	53 20	
			49 50	54 10	
759	do	do	Inshore of a line from Cape Freels to Cape Fogo.		90 percent cover close pack ice.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
			From Cape Bonavista		
			49 00 to 53 30		
			49 10 to 53 10		
			49 20 to 53 10		
			50 35 to 55 30		
			Groais Island		
760	May 3	Hydro-----	51 25 to 54 30		Eastern limits heavy pack ice.
			51 40 to 54 40		
			51 50 to 55 05		
			52 00 to 55 00		
			52 30 to 55 15		
			52 45 to 55 05		
761	do	do-----	{ Along eastern boundary of heavy pack ice and 8 to 10 miles seaward from Cape Bonavista to		Moderate concentrations field ice.
			{ 52 45 54 50		
762	May 4	Rio Lima-----	45 08	51 10	Berg (same as No. 704).
763	do	USNS Granby-----	46 18	50 23	Berg (same as No. 705).
764	do	Theeswood-----	1 mile offshore between-----		2 bergs, 6 growlers (same as Nos. 676, 677).
765	do	USNS Sgt. Jonah E. Kelley.	46 35	53 08	Berg (same as No. 764).
766	do	do-----	46 42	52 56	Berg and growler (same as No. 680).
767	do	do-----	46 48	52 56	Berg (same as No. 535).
768	do	USCGC Evergreen-----	45 44 From 53 56		Numerous growlers and field ice.
			46 32 to 54 21		
769	do	do-----	{ North from		Tongue of numerous growlers and field ice.
			{ 45 47 53 33		
770	do	USNS Sgt. Jonah E. Kelley.	Along east coast Avalon Peninsula from St. Johns to Cape Race.		Scattered growlers.
			45 55 From 53 28		Widely scattered light field ice.
771	do	Empress of France-----	45 55 to 53 41		
772	May 5	Captain Cook-----	45 23	50 47	Berg (same as No. 762).
773	do	MATS plane-----	46 25	50 15	Berg (same as No. 763).
774	do	USNS Sgt. Jonah E. Kelley.	46 35	53 17	Berg (same as No. 765).
775	do	do-----	46 36	53 47	Berg (same as No. 674).
776	do	Nova Scotia-----	Within 2 miles of Mistaken Point.		3 bergs (same as Nos. 766, 767, 774).
777	do	do-----	18 miles south-southwest of Cape Pine.		Loose strings field ice about 9 miles in extent with many growlers in and around field.
778	do	Ice Patrol plane-----	Within 5 miles of Cape Race.		Several growlers.
779	do	Nova Scotia-----	Cape Race-----		Numerous growlers.
780	do	Ice Patrol plane-----	46 42	53 52	Growler.
781	do	Nova Scotia-----	Cape Ballard-----		4 growlers.
782	do	do-----	Renews Rocks-----		1 growler on rocks, 3 more in vicinity.
783	do	do-----	1 mile south of Ferryland Head.		2 growlers.
784	do	do-----	5 miles northeast by east of Ferryland Head.		Growler.
			{ Inside a line from		
			{ 46 00 to 52 50		
785	do	Ice Patrol plane-----	46 00	53 30	Light strings and scattered brash ice.
			46 35	53 40	
			46 30	52 50	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
786	May 5	Ice Patrol plane	East of a line from Cape St. Mary to 46 20 54 05 to		Widely scattered large pieces field ice.
787	do	Nova Scotia	46 08 53 35 From Motion Bay northward and eastward leaving a shore lead ½-mile wide off Cape Spear.		Heavy field ice.
788	May 6	Ice Patrol plane	45 00	50 50	Small berg (same as No. 772).
789	do	do	45 02	50 38	Small berg (same as No. 668).
790	do	do	45 35	51 00	Medium berg (same as No. 589).
791	do	Empress of Australia	46 29	53 44	Small berg (same as No. 775).
792	do	do	46 35	53 02	2 small bergs (same as No. 776).
793	do	Ice Patrol plane	46 48	52 55	Small berg (same as No. 655).
794	do	American Manufacturer	44 34	49 16	Growler.
795	do	Empress of Australia	46 35	52 49	Do.
796	do	do	46 35	52 54	Do.
797	do	Ice Patrol plane	46 35	53 55	4 growlers.
798	do	do	46 45	53 55	Growler.
799	do	Empress of Australia	46 47	52 32	Do.
800	do	Ice Patrol plane	46 55	53 50	3 growlers.
801	do	do	47 49	52 00	Growler.
802	do	do	North of a line from 45 55 53 40 to		Scattered to light concentrations field ice.
			45 55	52 50	
			46 40 52 30 46 25 54 02 to		
803	do	Empress of Australia	46 30	53 16	Widely scattered field ice.
804	do	Nova Scotia	To limit of visibility north and south of 47 33 52 21		Strings of heavy field ice.
805	do	Ice Patrol plane	Between Cape Spear and Cape St. Francis and 2 to 3 miles offshore.		Field ice.
806	do	do	Conception Bay south of a line from Colliers Point to 47 44 53 05 to Cape St. Francis.		Close pack field ice.
807	do	do	Northern half Conception Bay.		Scattered growlers.
808	do	do	North of a line from Bay de Verde to 47 52 52 50 to		Field ice.
			48 10	52 10	
			44 54 50 58 45 00 50 50 45 40 51 02 45 43 50 35 45 43 50 40 45 44 50 58 45 46 50 44 44 11 49 31 44 54 50 51 45 31 52 41 45 37 52 30 45 43 50 40 46 05 53 22		
809	May 7	St. Cerque	44 54	50 58	Berg (same as No. 788).
810	do	Brisa	45 00	50 50	Berg (same as No. 809).
811	do	Mapledell	45 40	51 02	Berg (same as No. 790).
812	do	Scythia	45 43	50 35	Berg (same as No. 811).
813	do	Tunaholm	45 43	50 40	Berg (same as No. 812).
814	do	Irish Cedar	45 44	50 58	Berg (same as No. 813).
815	do	Cairnavon	45 46	50 44	Berg (same as No. 814).
816	do	Baron Elibank	44 11	49 31	Growler.
817	do	St. Cerque	44 54	50 51	Do.
818	do	Scythia	45 31	52 41	Do.
819	do	Tunaholm	45 37	52 30	3 growlers.
820	do	do	45 43	50 40	2 growlers.
821	do	Mapledell	46 05	53 22	Several growlers and scattered pieces field ice.
822	do	Molda	From 46 08 53 53 to 46 10 54 01		Scattered growlers.
823	do	Mapledell	From 46 14 54 14 to		Scattered growlers and scattered field ice.
824	do	USCGC Westwind	46 07 53 34 46 30 52 56		Scattered growlers.
825	do	do	From 46 32 54 16 to		Occasional growlers.
826	do	do	46 32 53 27		2 growlers.
827	do	do	46 33 54 00		Do.
			Off Cape St. Mary		

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
828	May 7	Molda.....	46 08	From 53 53	Pack ice.
			45 48	to 53 30	
829	do	Mapledell.....	46 07	Between 53 34	Widely scattered large pieces field ice.
			45 57	and 52 52	
830	May 8	USCGC Westwind....	46 56	From 52 34	Scattered growlers.
			47 35	to 52 20	
831	May 9	Ice Patrol plane.....	48 20	to 52 24	Medium berg (same as No. 773). Berg (same as No. 831). Berg (same as No. 832). Berg and growler (same as No. 803).
832	do	Ranenfjord.....	45 45	51 47	
833	do	Manchester Mariner.....	45 50	51 44	
834	do	Arthur Cross.....	45 52	51 43	
835	do	Ice Patrol plane.....	46 25	51 02	Small berg (same as No. 772). Small berg (same as No. 793). Small berg (same as No. 709).
836	do	do.....	46 36	52 55	
837	do	do.....	46 55	52 53	
			46 58	52 48	
838	do	Bristol City.....	45 52	From 54 58	Numerous growlers.
			45 53	to 54 56	
839	do	Manchester Trader.....	45 54	54 45	Growler.
840	do	do.....	45 57	54 50	Several growlers and scattered field ice.
841	do	Rathlin Head.....	46 00	54 50	Numerous growlers.
842	do	do.....	46 00	53 54	Numerous growlers and scattered field ice.
843	do	Sandsend.....	and 50 miles westward.	54 50	Growler and patch brash ice.
844	do	Yehuda.....	46 04	54 50	Scattered growlers.
845	do	Ice Patrol plane.....	46 13	54 48	Growler.
			46 40	53 23	Scattered pieces field ice.
846	do	Manchester Trader.....	45 42	From 53 14	
			45 47	to 54 19	Do.
847	do	Manchester Mariner.....	45 47	From 54 20	
			46 06	to 55 20	Small piece field ice.
848	do	Rathlin Head.....	45 56	53 49	
849	do	do.....	46 00	53 45	Do.
850	do	Probitas.....	46 10	55 20	Scattered pieces field ice.
851	do	Rathlin Head.....	46 11	53 43	Small piece field ice.
852	do	Ice Patrol plane.....	Between Cape Race and Cape Pine and 2 to 5 miles southward.		Scattered field ice.
853	do	do.....	Along east coast Avalon Peninsula and 2 miles seaward.		Scattered to heavy field ice.
854	May 10	Laurentia.....	45 43	52 06	Berg (same as No. 833).
855	do	Manchester Trader.....	45 47	51 43	Berg (same as No. 854).
856	do	USCGC Absecon.....	46 26	55 16	Berg (same as No. 791).
857	do	Elin Haven.....	46 03	From 55 22	Growlers.
			45 57	to 54 52	
858	do	Leada.....	46 14	55 23	Growler.
859	do	USCGC Absecon.....	46 16	55 27	Do.
860	do	Leada.....	46 18	54 35	Do.
861	do	USCGC Absecon.....	46 32	55 08	Do.
862	do	USCGC Mackinac.....	46 32	55 21	Do.
863	do	USCGC Mackinac.....	46 37	55 00	Do.
864	do	USCGC Absecon.....	46 38	55 05	Do.
865	do	do.....	46 42	54 59	Do.
866	do	USCGC Mackinac.....	46 43	54 56	Do.
867	do	do.....	46 48	54 55	Do.
868	do	USCGC Absecon.....	46 54	54 40	Numerous growlers.
869	do	USCGC Mackinac.....	47 02	54 29	Growler.
870	do	do.....	47 02	54 32	Do.
871	do	do.....	47 04	54 33	Do.
872	do	do.....	From Black Point to 47 12	54 20	Growlers and scattered field ice.
			thence southwest		
873	do	Manchester Trader.....	45 41	51 31	Small piece field ice.
874	do	Hydro.....	St. Johns Harbor entrance and approaches.		Blocked by field ice.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
875	May 10	Hydro.....	From Twillingate to 50 02	55 20	Eastern boundary field ice.
			50 43	55 27	
876	do	do.....	From 52 25	55 05	Do.
			53 25	55 20	
877	do	do.....	From 53 30	55 35	Do.
			53 33	55 05	
			53 45	55 45	
878	May 11	Beaverford.....	54 30	56 00	Berg and 3 growlers (same as No. 856).
			46 27	55 14	
879	do	Dundee.....	46 35	53 11	Berg (same as No. 792).
880	do	Beaverford.....	46 21	54 54	Growler.
881	do	Dundee.....	From 2 to 3 miles off Cape Race.		Field ice.
882	do	do.....	46 38	55 10	Pieces field ice.
			From 7 miles northeast of Fogo Island to 50 20	55 24	
			50 35	55 27	
883	do	Hydro.....	to 8 miles east northern tip Bell Island to 51 10	55 30	Eastern boundary field ice.
			to 4 miles east of northern tip Belle Isle to 52 30	55 17	
			to 2 miles east Seal Island to Island of Ponds to 53 29	55 10	
884	May 12	Empress of France.....	46 33	55 25	Berg (same as No. 878).
885	do	Ice Patrol plane.....	47 40	53 02	Small berg.
886	do	do.....	47 41	52 57	Do.
887	do	Camellia.....	46 19	55 40	Growler.
888	do	Homerie.....	46 25	56 14	Do.
889	do	Empress of France.....	46 33	55 25	Do.
890	do	USCGC Absecon.....	46 38	54 22	4 growlers.
891	do	Ice Patrol plane.....	47 37	53 01	Growler.
892	do	do.....	47 38	52 59	Do.
893	do	Cabot Tower.....	St. Johns Harbor		Full of close pack ice.
			From 51 05	55 13	
			52 00	54 40	
			52 30	55 02	
894	do	Hydro.....	to 5 miles east of Seal Island 53 33	55 30	Eastern boundary field ice.
			53 25	55 02	
			54 15	54 55	
			54 30	55 15	
895	May 13	USCGC Absecon.....	44 34	51 39	Berg (same as No. 789).
896	do	do.....	44 37	51 23	Berg (same as No. 809).
897	do	Begonia.....	45 32	53 37	Berg (same as No. 792).
898	do	Empress of France.....	46 35	53 12	Berg (same as No. 879).
899	do	Hydro.....	54 00	55 40	Berg.
900	do	USCGC Absecon.....	44 37	51 18	Growler.
901	do	do.....	44 38	51 29	Do.
902	do	Begonia.....	45 30	53 30	Do.
903	do	do.....	45 32	53 43	Do.
904	do	Imperial Sarnia.....	46 14	55 39	Do.
905	do	do.....	46 23	55 44	Do.
906	do	Marquette.....	46 26	56 06	Do.
907	do	Gunvor Marsk.....	46 28	56 27	Do.
908	do	Governor of St. Pierre Island.	South and west of St. Pierre Island.		Growlers.
909	do	Francisca Sartori.....	46 13	56 04	Scattered field ice.
910	do	Hydro.....	St. Johns Harbor		Close pack ice.
911	do	do.....	53 00	55 15	Belts of field ice.
			From 53 47	55 30	
912	do	do.....	54 20	56 35	Eastern boundary field ice.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' ''	° ' ''	
913	May 14	Goodwood	44 26	52 05	Berg (same as No. 895).
914	do	Prins Frederik Willem	44 35	52 47	Berg (same as No. 854).
915	do	Rialto	45 01	53 33	Berg (same as No. 897).
916	do	Prins Frederik Willem	44 35	52 47	2 growlers.
917	do	Rialto	45 15	45 19	Growler.
918	do	Federal Voyager	45 50	56 05	Do.
919	do	do	46 02	56 32	Do.
920	May 15	Wanderer	45 00	54 25	Do.
921	do	Cortona	46 04	56 20	Do.
922	do	Baron Haig	46 10	55 58	Do.
923	do	Cortona	46 10	56 10	Several growlers and numerous small pieces.
924	do	Baron Haig	46 11	56 06	
925	do	Cortona	46 12	56 17	Growler.
926	May 16	Drammensfjord	44 54	54 23	Do.
927	do	Dunelmia	45 50	56 53	Several growlers.
928	do	Hydro	54 40	55 50	Eastern boundary field ice.
929	May 17	Prins Maurits	56 00	57 30	
930	do	Ice Patrol plane	46 49	53 27	Berg (same as No. 898).
931	do	Prins Maurits	46 29	55 38	Growler.
932	do	do	46 34	53 42	Growler and small pieces.
933	do	do	46 40	55 45	Scattered growlers.
			Off Cape Pine		Growler and two small pieces.
			From northwest tip of North Twillingate Island southwest to the northeast tip of Exploits, thence northwest to 49 37 55 30 thence northeast to 2 miles east of Gull Island thence northwest to 10 miles southeast of St. Barbe Island thence 50 10 55 20 to 50 30 55 40 to southeast tip of Bell Island 51 10 55 13 to 51 30 55 06		Eastern boundary field ice.
934	do	Hydro	46 39	53 17	
935	May 18	Ice Patrol plane	46 42	53 03	Small berg (same as No. 929).
936	do	do	46 45	52 58	Small berg (same as No. 792).
937	do	do	46 47	52 56	Small berg (same as No. 709).
938	do	do	46 48	52 53	Medium berg (same as No. 793).
939	do	do	46 48	52 53	Medium berg (same as No. 710).
940	do	do	Along east coast Avalon Peninsula from Cape Race to Lat. 47° N.		Numerous growlers.
941	do	do	46 58	55 12	Growler.
942	do	do	47 00	50 00	Do.
943	do	Hydro	St. Johns Harbor		Few growlers.
944	do	Ice Patrol plane	8 to 10 miles off east coast Avalon Peninsula from Cape Race to Lat. 47° N.		Scattered patches brash ice.
945	do	Hydro	Southwestern 2/3 Conception Bay.		
946	do	do	8 miles off Torbay		100 percent cover field ice.
			51 00	55 10	12- by 3-mile belt field ice.
			52 00	55 00	
			53 02	55 25	
			53 05	55 42	
947	do	do	thence 1 to 2 miles offshore		
			53 30	55 42	
			53 43	55 52	
			54 08	56 00	
			54 30	55 35	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' From	° ' to	
948	May 18	Ice Patrol plane-----	54 29	57 06	Eastern boundary field ice including many bergs.
			54 35	57 06	
			54 51	57 40	
			55 06	57 41	
			55 08	58 16	
			55 21	58 47	
			55 32	59 05	
			55 54	60 01	
949	May 19	Empress of Australia---	46 47	52 55	Berg and three growlers (same as No. 938).
950	do	do-----	Off Chance Cove Head-----		Berg (same as No. 939).
951	do	Ice Patrol plane-----	47 37	53 09	Small berg (same as No. 885).
952	do	do-----	47 40	52 57	Small berg (same as No. 886).
953	do	do-----	47 44	53 38	Small berg.
954	do	do-----	48 29	53 04	Do.
955	do	do-----	48 34	52 59	Do.
956	do	do-----	47 36	53 03	Growler.
957	do	Empress of Scotland---	46 33	52 57	Several small pieces.
958	do	Ice Patrol plane-----	Southwestern half Conception Bay.		80 percent cover field ice.
959	May 20	do-----	47 42	52 35	Strip field ice.
			From 5 miles east Groais Island to		
			51 00	55 00	
			51 30	54 35	
			51 38	54 35	
			51 38	55 10	
			51 50	54 10	
			52 00	54 45	
			52 00	55 05	
			52 10	55 00	
			52 25	54 35	
			52 50	54 15	
			52 50	55 15	
			53 30	54 30	
			53 35	54 40	
			53 25	55 00	
			53 40	55 10	
			53 20	55 10	
			53 00	55 30	
			52 45	55 30	
			52 40	55 15	
960	do	Hydro-----	12 miles northwest of Belle Isle		Secondary pack boundary

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' From	° ' to	
			54 24	57 35	
			54 12	57 17	
			54 00	56 33	
			53 48	56 27	
			53 42	55 55	
			53 30	55 42	
			53 15	55 42	
961	May 20	Hydro	53 20	55 15	Eastern boundary field ice.
			53 30	55 37	
			54 10	55 32	
			54 06	55 45	
			54 15	55 45	
			54 25	55 13	
			54 50	55 08	
			54 55	54 30	
			55 17	54 05	
962	May 23	Ice Patrol plane	47 40	53 38		Small berg.
963	do	do	48 05	53 10	3 small bergs.
964	do	do	48 10	52 53	2 small bergs.
965	do	do	48 20	53 20	Small berg.
966	do	do	48 30	53 00	2 small bergs.
967	do	do	48 38	53 17	Small berg.
968	do	do	48 40	53 00	Do.
969	do	do	48 43	53 15	Do.
970	do	do	49 10	53 15	Medium berg.
971	do	do	49 15	53 20	6 small bergs.
972	do	do	Inshore of a line from Cape Freels to Funk Island to Cape Fogo.		15 bergs.
973	do	do	47 53	53 26	Growler.
974	do	do	47 59	53 20	Do.
975	do	do	48 03	53 14	Do.
976	do	do	48 05	53 04	Do.
977	do	do	48 11	52 55	Do.
978	do	do	48 38	53 00	3 growlers.
979	do	do	49 10	53 25	6 growlers.
980	do	do	49 15	53 25	Do.
981	do	do	Inshore of a line from Cape Freels to Funk Island to Cape Fogo.		20 growlers.
982	do	do	From latitude 48° 10' N. to latitude 49° 00' N. between longitudes 52° 20' W. and 52° 40' W.		Patch field ice 10 percent cover.
983	do	do	From Cape Freels to Funk Island.		Widely scattered field ice.
			49 10	52 30	
			to		
			54 05	55 00	
			54 05	54 00	
984	do	Hydro	54 20	53 25	
			54 40	52 00	
			55 00	52 00	
			55 15	53 00	
			From		
			56 00	55 36	
985	do	do	55 55	56 00		Do.
			56 00	56 50	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
986	May 24	Beaverglen	Vicinity of Cape Ballard.		4 small bergs (same as Nos. 936, 937, 949, 950).
987	do	USNS Sgt. Jonah E. Kelley.	46 45	52 59	Berg (same as No. 986).
988	do	do	46 49	52 55	Do.
989	do	do	46 55	52 55	Do.
990	do	do	46 57	52 53	Do.
991	do	Nova Scotia	47 32	52 25	Small berg.
992	do	Cairnavon	Trepassey Bay		Small growler.
993	do	Beaverglen	do		Growler.
994	do	Nova Scotia	Motion Bay		2 growlers.
995	do	do	Between latitudes 47°35' N. and 47°45' N. from east coast Newfoundland to longitude 52°10' W.		Patches sloh and field ice.
996	do	Hydro	50 00	From 53 30	Field ice boundary.
			52 30	to 53 45	
			52 30	to 55 20	
			54 20	to 55 30	
997	May 25	Nova Scotia	Three miles northeast of Cape Spear.		Small berg (same as No. 991).
998	do	Hydro	Strait of Belle Isle		Many bergs and bergy bits. No field ice.
999	do	do	10 mile radius of South Wolf Island.		Few bergs and bits.
1000	do	do	10 miles east Hawks Island.		Do.
1001	do	do	St. Michael Bay		Do.
1002	do	do	5 miles east Fox Harbor.		Do.
1003	do	do	12 mile radius west and south of Belle Isle.		Many bergs and bits.
1004	do	Arthur Cross	Northward from Cape Spear.		Scattered growlers.
1005	do	Nova Scotia	Approaches to St. Johns Harbor.		Scattered light pieces field ice.
1006	do	Hydro	50 00	From 53 50	Field ice boundary.
			50 15	to 54 20	
			50 22	to 54 10	
			thence curving south to		
			50 12	to 53 55	
			50 20	to 53 50	
			50 30	to 54 08	
			50 20	to 54 30	
1007	do	do	50 45	From 54 55	Belt of field ice 5 miles wide.
			55 19	to 55 10	
			51 32	to 55 10	
			Southwestern 2/3 Hare Bay.		
1008	do	do	St. Mein Bay.		Close pack field ice.
1009	do	do	From 15 miles wide at		Few small floes.
1010	do	do	52 25	to 55 08	Belt close pack field ice.
			to 8 miles wide at		
			52 27	to 54 19	
			thence curving northward to 5 miles wide at		
1011	do	do	52 55	to 54 10	Shore lead with 10 to 40 percent coverage field ice.
			Along east coast of Labrador from Strait of Belle Isle to Hamilton Inlet and 2 to 20 miles seaward.		
1012	May 26	Ice Patrol plane	51 30	54 20	Medium berg.
1013	do	do	51 31	54 41	Do.
1014	do	do	20 miles east of Cape Bauld.		3 bergs.
1015	do	do	20 miles east of Belle Isle.		7 bergs.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' From	° ' to	
1016	May 26	Ice Patrol plane.....	49 50	53 46	Seaward field ice limits.
			50 10	54 40	
			51 05	54 40	
			51 20	53 50	
			52 05	54 27	
1017	May 27	do.....	46 48	52 56	Small berg (same as No. 988).
1018	do.....	USNS Sgt. Jonah E. Kelley.	46 54	52 54	Berg (same as No. 1017).
1019	do.....	do.....	46 56	52 53	Berg (same as No. 989).
1020	do.....	Ice Patrol plane.....	46 56	52 55	Small berg (same as No. 1019).
1021	do.....	do.....	46 58	52 54	Small berg (same as No. 990).
1022	do.....	USNS Sgt. Jonah E. Kelley.	46 59	52 55	Berg (same as No. 1021).
1023	do.....	Ice Patrol plane.....	47 39	52 39	Small berg.
1024	do.....	do.....	In Conception Bay		2 small bergs (same as Nos. 951, 952).
1025	do.....	do.....	47 56	52 54	Small berg.
1026	do.....	do.....	48 04	53 09	Do.
1027	do.....	do.....	48 11	52 54	Do.
1028	do.....	do.....	Within 2 miles of Cape Bonavista.		7 bergs.
1029	do.....	do.....	48 43	52 35	Small berg.
1030	do.....	do.....	In Bonavista Bay		11 bergs.
1031	do.....	do.....	Within 15 miles of Cape Freels.		20 bergs.
1032	do.....	do.....	Between Cape Freels and Fogo Island.		50 bergs.
1033	do.....	do.....	49 52	54 05	Small berg.
1034	do.....	do.....	49 53	53 56	Do.
1035	do.....	do.....	50 02	53 52	Medium berg.
1036	do.....	do.....	50 54	54 55	Small berg.
1037	do.....	do.....	Vicinity Grey Islands.....		30 bergs.
1038	do.....	do.....	50 56	57 08	Small berg.
1039	do.....	do.....	Along shore from Cape Mecatina to Wood Island.		21 bergs.
1040	do.....	do.....	Entrance to Hare Bay.....		10 bergs.
1041	do.....	do.....	Strait of Belle Isle.....		23 bergs.
1042	do.....	do.....	51 45	54 23	Berg.
1043	do.....	do.....	51 46	54 39	Do.
1044	do.....	do.....	Vicinity Belle Isle.....		28 bergs.
1045	do.....	do.....	52 09	54 36	Berg.
1046	do.....	do.....	52 11	54 32	Do.
1047	do.....	do.....	52 12	54 40	Do.
1048	do.....	do.....	52 13	54 35	Do.
1049	do.....	do.....	52 19	54 35	Do.
1050	do.....	do.....	52 22	54 42	Do.
1051	do.....	do.....	52 30	54 45	Do.
1052	do.....	Blyth Trader.....	Inshore vicinity Cape Race.		2 growlers.
1053	do.....	Ice Patrol plane.....	46 41	53 18	Growler.
1054	do.....	do.....	46 44	53 02	Do.
1055	do.....	do.....	Within 1 mile of Motion Head.		2 growlers.
1056	do.....	do.....	Within 1 mile of Cape Spear.		Do.
1057	do.....	do.....	In Torbay.....		Growler.
1058	do.....	do.....	in Conception Bay.....		Several growlers.
1059	do.....	do.....	47 38	53 37	Growler.
1060	do.....	do.....	Entrance to Trinity Bay		Several growlers.
1061	do.....	do.....	Within 20 miles of Cape Bonavista.		Many growlers.
1062	do.....	do.....	Strait of Belle Isle.....		Do.
1063	do.....	do.....	Vicinity Belle Isle.....		Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1064	May 27	Ice Patrol plane-----	West and south of a line from Fogo Island.		Scattered to heavy field ice.
			50 30	53 35	
			50 05	54 45	
			50 55	55 05	
			51 20	53 35	
			51 40	54 30	
			51 55	53 25	
			50 20	53 35	
			52 20	54 45	
			52 15	55 25	
1065	do-----	Hydro-----	51 45	55 00	90 percent clear of ice except few large pieces along edge. Several bergs (same as Nos. 1018, 1020, 1022).
			51 30	55 25	
1066	May 28	Arthur Cross-----	St. Anthony Harbor-----		
			Inshore east coast Avalon Peninsula at latitude 47°03' N.		
1067	do-----	Hydro-----	From		Field ice boundary
			52 45	53 50	
			53 35	53 50	
			53 55	55 10	
			54 10	54 05	
			54 45	54 15	
			54 55	54 30	
			54 40	54 50	
			55 04	55 00	
			55 08	55 15	
1068	May 29	Ungava-----	55 00	55 40	Many bergs.
			54 55	56 30	
			55 10	57 10	
			55 15	56 50	
			55 25	57 00	
			56 00	57 40	
			49 09	53 16	
			51 00	55 01	
			51 08	55 11	
			52 00	51 58	
1069	do-----	Astarte-----	USNS Marine Carp-----		Berg.
1070	do-----	USNS Marine Carp-----	Notre Dame Bay from 15 miles north of Twillingate extending eastward 25 miles.		Field ice.
1071	do-----	Astarte-----	From		Heavy ice field.
			50 43	55 11	
1072	do-----	do-----	51 08	55 11	
			Motion Head-----		
1073	do-----	do-----	Vicinity Fogo Island-----		3 small bergs.
1074	May 30	USNS Donner-----	50 17	54 28	65 bergs.
			50 20	54 20	
1075	do-----	Ice Patrol plane-----	Vicinity Grey Islands-----		Berg.
1076	do-----	do-----	Entrance to Hare Bay-----		Do.
1077	do-----	do-----	Area 20 miles east of Cape Bauld.		28 bergs.
1078	do-----	do-----	51 34	50 27	12 bergs.
			51 35	54 30	
1079	do-----	do-----	51 37	50 18	20 bergs.
			51 39	54 20	
1080	do-----	do-----	Berg.		Do.
1081	do-----	do-----	Do.		Do.
1082	do-----	do-----	Do.		Do.
1083	do-----	do-----	Do.		Do.
1084	do-----	do-----	Do.		Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
1085	May 30	Ice Patrol plane.....	51 45	54 25	Berg
1086	do.....	do.....	51 57	51 19	Do.
1087	do.....	do.....	52 00	51 26	Do.
1088	do.....	do.....	52 04	51 19	Do.
1089	do.....	do.....	Vicinity Belle Isle.....		50 bergs.
1090	do.....	do.....	52 25	51 10	Berg.
1091	do.....	do.....	52 27	54 50	Do.
1092	do.....	do.....	Vicinity.....		4 bergs.
			52 40	55 20	
1093	do.....	do.....	52 46	52 05	Berg.
1094	do.....	do.....	52 48	52 00	Do.
1095	do.....	do.....	52 49	52 05	Do.
1096	do.....	do.....	52 50	52 55	Do.
1097	do.....	Hydro.....	53 50	51 15	Many bergs and growlers.
1098	do.....	do.....	54 15	56 48	Many bergs and growlers.
1099	do.....	U. S. Navy ship.....	Within a radius of 8 miles from		Do.
			54 18	51 36	
1100	do.....	do.....	55 18	51 36	Berg.
1101	do.....	Ice Patrol plane.....	Vicinity Fogo Island.....		Many growlers.
1102	do.....	do.....	Vicinity Belle Isle.....		Do.
1103	do.....	do.....	Vicinity.....		Do.
			52 30	53 00	
			West of a line from		
			49 45	55 55	
			50 00	53 35	
			50 20	54 50	
			50 45	55 00	
1104	do.....	do.....	50 50	53 30	Scattered to heavy field ice.
			51 35	54 20	
			51 55	54 05	
			52 35	55 15	
			52 50	55 15	
			From		
			50 34	54 45	
			50 50	54 35	
			50 50	54 45	
			51 00	54 52	
			51 40	53 45	
			51 50	53 50	
			52 05	54 15	
1105	do.....	Hydro.....	51 57	55 04	Field ice boundary.
			51 50	54 07	
			51 47	54 05	
			51 45	54 45	
			51 00	55 32	
			50 47	55 28	
			50 23	55 40	
			50 34	55 00	
			50 34	54 45	
			52 20	51 42	
1106	do.....	USNS Donner.....	North of a line from		Field ice.
			52 50	54 40	
			52 25	54 40	
1107	do.....	Ice Patrol plane.....	51 55	51 05	Scattered to heavy field ice.
			52 20	50 40	
			53 00	51 25	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1108	May 30	Hydro.....	53 00 53 20 53 05 53 05 54 30 54 15 54 36 54 30	From 51 00 to 52 30 to 54 00 From 51 00 to 52 45 to 53 10 to 54 00 to 54 30	Southern limit field ice.
1109	do.	do.....	54 55 55 05 55 08 55 05 55 15	to 57 30 to 57 50 to 57 40 to 57 30 to 57 05	Field ice boundary.
1110	May 31	Westport.....	55 40 54 04	57 30 50 47 From 54 18 to 53 48 to 53 50 to 54 20 to 55 19 to 55 10 to 54 40 to 54 11 to 53 37 to 53 30 to 54 10 to 53 10 to 54 58 to 54 18 to 54 25 to 55 00 to St. Anthony From St. Peters Bay to 55 30 to 55 45 to 55 20 to 54 59 to 55 10 to 55 22 to 55 05 to 53 20 to 53 26 to 54 15 to 56 00	Berg.
1111	do.	Hydro.....	50 00 50 07 50 17 50 30 50 18 50 45 50 48 50 58 50 47 51 00 51 19 51 48 52 15 51 48 51 29 51 10	to 54 18 to 53 48 to 53 50 to 54 20 to 55 19 to 55 10 to 54 40 to 54 11 to 53 37 to 53 30 to 54 10 to 53 10 to 54 58 to 54 18 to 54 25 to 55 00	Field ice boundary.
1112	do.	do.....	52 40 52 45 53 00 52 53 53 05 53 15 53 35 54 00 54 14 54 40 54 04	to 55 30 to 55 45 to 55 20 to 54 59 to 55 10 to 55 22 to 55 05 to 53 20 to 53 26 to 54 15 to 56 00	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description	
1113	June 1	Empress of Scotland	46 40	53 16	Growler.	
1114	do	Arthur Cross	Along shoreline east coast Avalon Peninsula. From 15 miles east of Black Bear Bay to	53 35	55 05	Several growlers.
			53 50	51 50		
			54 10	51 50		
1115	do	Hydro	54 00	52 55	Field ice boundary.	
			54 10	53 50		
			54 37	54 00		
			54 35	55 10		
			54 55	55 35		
			From			
			53 30	54 00		
			53 30	54 15		
			54 00	53 25		
			54 39	53 58		
			55 00	54 48		
1116	do	do	55 14	56 30	Do.	
			55 08	57 30		
			55 15	57 43		
			55 35	57 21		
			55 08	56 55		
			55 49	56 44		
			56 04	57 00		
1117	June 2	Ice Patrol plane	Area inshore of a line from Cape Freels to Funk Is- land to Cape Fogo.		15 bergs.	
1118	do	do	49 50	53 45	3 bergs.	
1119	do	do	49 55	53 45	Small berg.	
1120	do	do	50 06	53 44	Do.	
1121	do	do	50 08	53 50	Do.	
1122	do	do	51 00	51 30	Do.	
1123	do	do	51 14	53 43	Do.	
1124	do	do	51 17	50 13	Berg.	
1125	do	do	51 20	53 43	Small berg.	
1126	do	do	51 53	50 33	Do.	
1127	do	do	51 55	50 45	3 small bergs.	
1128	do	do	51 57	51 20	Small berg.	
1129	do	do	52 07	51 20	Five small bergs.	
1130	do	do	52 13	51 40	Medium berg.	
1131	do	Unidentified plane	53 00	51 00	30 bergs and field ice.	
1132	do	Lufthansa plane	55 50	56 17	Berg.	
1133	do	Ice Patrol plane	49 48	53 06	Growler.	
1134	do	do	49 55	53 20	Do.	
			From			
			52 20	54 10		
			to			
			50 08	53 40		
1135	do	do	50 12	52 42	Patch of less than 10 percent cover field ice.	
			to			
			50 15	53 20		
			to			
			50 30	53 50		
			From			
			51 15	53 50		
			to			
1136	do	do	51 10	52 25	Patch of 10 percent cover field ice.	
			to			
			51 38	53 17		
			to			
			50 50	53 40		

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1137	June 2	Ice Patrol plane-----	° ' ° ' From	50 10	Patch of scattered field ice.
			51 50	50 20	
			52 00	50 20	
			51 50	50 20	
1138	do	do-----	51 45	50 45	Scattered to light concentrations
			51 45	51 20	field ice.
			52 00	51 25	
			52 00	52 15	
			52 25	54 40	
			53 00	54 00	
			53 35	53 35	
			53 40	53 20	
			53 15	53 40	
1139	do	Hydro-----	53 30	52 25	Field ice boundary.
			54 02	53 00	
			53 55	54 00	
			54 25	54 05	
			54 40	54 55	
			54 45	55 45	
			55 15	56 10	
			52 16	55 42	
1140	do	do-----	52 55	54 35	Belt of field ice 10 miles wide.
			53 35	55 20	
			53 40	56 27	
			55 57	58 16	
			55 22	56 11	
			55 13	56 11	
			55 11	56 30	
1141	do	do-----	55 25	57 55	Field ice boundary.
			55 10	57 45	
			55 05	56 55	
			55 12	57 00	
			55 05	56 30	
			55 19	56 05	
1142	June 3	Evergreen-----	55 10	55 30	Large bergs and numerous
			51 47	51 00	growlers.
1143	do	do-----	51 48	50 34	Medium berg.
1144	do	Luciana-----	53 30	51 40	Field ice with many bergs and
					growlers.
1145	do	TWA-----	53 30	52 00	Several large bergs.
1146	do	Luciana-----	53 52	50 40	Growler.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			From		
			50 30	55 10	
			to		
			50 25	55 32	
			to		
			50 58	55 30	
			to		
			50 40	55 08	
			to		
			50 43	55 00	
			to		
			51 15	54 50	
			to		
			51 25	55 00	
			to		
1147	June 3	Hydro-----	51 45	54 45	Eastern boundary of Newfoundland main pack.
			to		
			51 50	54 53	
			to 12 miles east of Cape Bauld to 16 miles east of St. Anthony to		
			50 58	55 13	
			to		
			51 00	55 27	
			to		
			52 12	55 18	
			to		
			51 12	55 28	
			to		
			51 05	55 33	
1148	do	USCGC Evergreen-----	North of latitude 51°45' N. and between longitudes 50°15' W. and 51°05' W.		Heavy field ice.
1149	do	do-----	51 48	50 15	Field ice.
			From		
			52 23	55 20	
			to		
			52 32	55 20	
			to		
			52 00	55 05	
			to		
			52 05	55 05	
			to		
			52 45	55 15	
			to		
			53 00	55 05	
			to		
			52 40	54 55	
			to		
			52 55	54 50	
			to		
			52 50	54 35	
			to		
1150	do	Hydro-----	53 00	54 15	Eastern boundary of main pack.
			to		
			53 30	54 18	
			to		
			53 40	54 40	
			to		
			54 00	54 40	
			to		
			54 20	55 30	
			to		
			54 15	56 15	
			to		
			54 45	56 25	
			to		
			54 45	57 00	
			to		
			55 05	57 55	
			to		
			55 30	58 30	
			to		
			55 27	60 12	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			From		
			52 23	55 20	
			to		
			52 45	55 30	
			to		
			53 13	55 34	
			to		
			53 34	55 20	
			to		
			53 38	55 38	
			to		
			53 33	55 42	
			to		
			53 43	55 45	
			to		
			53 35	54 55	
			to		
			53 52	55 16	
			to		
			53 48	56 00	
			to		
1151	June 3	Hydro.....	54 15	56 15	Western boundary of main pack.
			to		
			54 10	56 30	
			to		
			54 25	56 35	
			to		
			54 08	56 45	
			to		
			55 25	59 38	
			to		
			54 31	57 14	
			to		
			54 41	57 41	
			to		
			55 01	57 55	
			to		
			55 00	58 16	
			to		
			55 05	58 36	
			to		
			55 16	58 13	
1152	June 4	Monterey.....	48 35	52 58	Berg.
1153	do.	USCGC Evergreen.....	51 15	53 35	Do.
1154	do.	do.	51 25	53 55	Do.
1155	do.	USCGC Evergreen.....	51 27	53 22	Berg.
1156	do.	do.	51 30	53 16	Do.
1157	do.	do.	51 33	53 24	Do.
			From		
1158	do.	Luciana.....	53 27	51 50	Nearly closed ice fields. Many bergs.
			to		
			53 05	54 35	
			From		
1159	do.	USCGC Evergreen.....	51 17	50 40	Field ice.
			to		
			51 15	50 00	
			Southward from		
1160	do.	do.	51 30	52 55	Moderate field ice.
			to limit of visibility.		
			From		
			51 30	52 55	
			to		
1161	do.	do.	51 30	54 00	Heavy field ice.
			and westward to limit of visibility.		
1162	June 5	L'Aventure.....	50 40	50 15	Large berg.
1163	do.	do.	50 42	50 37	Do.
1164	do.	do.	51 15	50 00	Southeast limit field ice.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			From		
			52 30	55 44	
			to		
			52 30	55 20	
			to		
			53 00	55 30	
			to		
			53 10	55 00	
			to		
			53 47	54 30	
			to		
			53 00	53 55	
			to		
			53 10	53 30	
			to		
			52 54	52 00	
			to		
			52 42	52 55	
			to		
			52 25	53 25	
			to		
			52 25	52 50	
			to		
1165	June 5	Hydro-----	53 00	51 05	Field ice boundary.
			to		
			53 30	53 00	
			to		
			53 25	54 00	
			to		
			53 40	53 35	
			to		
			54 00	55 00	
			to		
			54 37	53 40	
			to		
			54 32	54 32	
			to		
			54 45	55 03	
			to		
			54 45	54 25	
			to		
			54 52	54 30	
			to		
			55 02	55 35	
			to		
			55 20	55 50	
1166	June 6	Arthur Cross-----	Torbay-----		Berg and two growlers (same as No. 1023).
1167	do-----	do-----	Northeast corner Bell Island		Berg (same as No. 1024).
1168	do-----	USNS Edisto-----	54 01	54 50	Scattered field ice, few bergs, many bits and growlers.
1169	do-----	Arthur Cross-----	South side of Bell Island		Growler.
			From		
1170	do-----	USCGC Evergreen-----	50 00	52 20	Eastern limit of heavy field ice.
			to		
			50 10	52 35	
1171	do-----	USNS Edisto-----	Strait of Belle Isle		Clear of field ice.
1172	June 7	do-----	54 00	56 15	Few bergs.
			From		
			50 00	55 05	
			to		
1173	do-----	Hydro-----	50 50	54 30	Field ice boundary.
			to		
			51 25	55 15	
			From		
			52 10	54 35	
			to		
			53 07	54 20	
			to		
1174	do-----	Hydro-----	52 57	53 40	Do.
			to		
			53 38	54 00	
			to		
			53 25	54 22	
			to		
			54 22	54 45	
1175	June 8	USCGC Evergreen-----	Vicinity Lance Cove		Berg and several growlers.
1176	do-----	Hydro-----	Hare Bay to Cape Bauld		Few bergs.
			From		
			52 17	55 32	
			to		
1177	do-----	do-----	53 51	55 45	Field ice boundary.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1178	June 10	Hydro.....	° /	° /	
1179	...do....	...do....	51 59	54 55	Numerous bergs.
1180	...do....	USNS Edisto.....	52 34	54 41	Do.
			53 54	56 09	Bergs, bits, and growlers.
			From northeast tip of Spotted Island to		
			53 40	56 00	
			to		
1181	...do....	Hydro.....	53 53	56 00	
			to		
			54 00	56 18	Western boundary field ice.
			to		
			54 15	56 18	
			to		
			54 25	56 40	
			to		
			54 43	56 45	
			From		
1182	...do....	...do....	54 00	55 35	Eastern boundary field ice.
			to		
			54 08	55 18	
1183	...do....	...do....	54 31	56 56	3- by 10-mile patch field ice.
1184	June 11	USNS Marine Carp.....	52 06	52 18	Widely scattered bergs and small bits.
1185	...do....	USNS Bondia.....	52 08	52 34	Scattered bergs.
			From		
1186	...do....	USCGC Westwind.....	52 15	52 04	Occasional bergs and bergy bits.
			to		
			53 00	52 06	
1187	...do....	USNS Donner.....	53 14	53 23	Belt of scattered bergs and growlers.
1188	...do....	USNS Edisto.....	53 15	53 47	Few scattered bergs.
			From		
			53 30	55 42	
			to		
			53 43	55 55	
			to		
1189	...do....	Hydro.....	53 48	55 32	Field ice limits with concentra- tions generally light to very light.
			to		
			53 45	55 40	
			to		
			54 20	56 55	
			to		
			54 35	56 35	
1190	...do....	...do....	54 46	55 38	2- by 15-mile belt heavy field ice.
			From		
1191	June 12	Welheim.....	52 05	54 32	Numerous bergs and growlers.
			to		
			53 03	52 06	
1192	...do....	...do....	52 50	52 35	2 bergs.
1193	...do....	...do....	53 02	52 07	Small berg.
1194	...do....	Hydro.....	From White Bear Island to 15 miles east of Gannet Island to 5 miles east of South Wolf Island.		Western boundary field ice with many bergs, bits, and growlers to westward and in pack.
1195	...do....	USNS Edisto.....	54 05	56 16	Scattered bergs and growlers.
			From		
1196	...do....	Hydro.....	54 30	56 00	Eastern boundary field ice.
			to		
			53 40	54 50	
1197	June 13	...do....	Vicinity Penguin Island.....		Few bergs.
1198	...do....	...do....	Vicinity Wadham Island.....		Many bergs.
1199	...do....	...do....	Strait of Belle Isle.....		Many bergs, few bits and growl- ers.
			From		
1200	...do....	USNS LST 694.....	51 45	53 00	Bergs, bergy bits, and growlers.
			to		
			52 10	53 03	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			From coast at Cape Harrison along coast to east entrance to Byron Bay		
			54 50	56 42	
			54 35	56 32	
			54 32	56 20	
1201	June 13	Hydro.....	54 48	56 15	Eastern boundary field ice including many bergs, bits, and growlers.
			54 48	55 00	
			55 05	55 20	
			55 28	55 25	
			55 51	55 55	
			55 52	56 20	
1202	..do..	..do..	Vicinity St. Barbe Islands.		Few bits and growlers.
1203	..do..	..do..	Vicinity Orange Bay.		Do.
1204	..do..	..do..	50 17	54 50	Do.
1205	..do..	..do..	Off Old Fort Island.		Do.
1206	..do..	..do..	Along coast from White Bay to Notre Dame Bay.		Field ice.
			From South Wolf Island to Gannet Island to East Rocks to 9 miles east of White Bear Island		
1207	..do..	..do..	54 32	56 20	Western boundary field ice.
			Confusion Bay.		
1208	June 14	..do..	54 26	52 55	Scattered bergs and growlers.
1209	..do..	USNS Edisto.	54 39	53 22	Scattered bergs and ice fields.
1210	..do..	..do..	54 52	54 01	Belts and patches heavy field ice.
1211	..do..	..do..	50 11	53 49	Heavy pack ice.
1212	June 15	USAF plane.	Entrance to St. Mein Bay.		Large berg.
1213	..do..	Hydro.	Strait of Belle Isle.		2 bergs.
1214	..do..	USNS Donner.	Between latitudes 51°55' N. and 52°40' N. and longitudes 51°00' W. and 53°20' W.		3 large bergs and few tiny bits.
1215	..do..	Homerie.	White Bay.		33 bergs and numerous growlers.
1216	..do..	Hydro.....	From Cut-throat Island.		Moderate concentrations field ice
			54 25	55 20	
			54 33	55 30	
1217	..do..	..do..	54 40	56 05	Field ice boundary.
			54 50	56 05	
			55 00	55 53	
			47 35	53 38	
1218	June 16	Ice Patrol plane.	47 50	53 05	Small berg.
1219	..do..	..do..	48 04	52 53	2 small bergs.
1220	..do..	..do..	48 05	53 35	Small berg.
1221	..do..	..do..	48 15	53 25	Do.
1222	..do..	..do..	48 30	53 03	Do.
1223	..do..	..do..	49 15	53 14	2 small bergs.
1224	..do..	..do..	49 26	51 48	6 bergs.
1225	..do..	..do..	49 27	52 00	Small berg.
1226	..do..	..do..	49 27	52 06	Do.
1227	..do..	..do..	From Cape Fogo to Funk Island to Cape Freels.		Do.
1228	..do..	..do..	49 46	53 17	20 bergs.
1229	..do..	..do..	49 48	51 31	Small berg.
1230	..do..	..do..	49 57	53 38	Do.
1231	..do..	..do..	50 18	51 23	Do.
1232	..do..	..do..	50 19	53 00	Do.
1233	..do..	..do..	52 23	54 15	
1234	..do..	Cairngowan.	52 49	52 24	15 bergs and 5 growlers.
			South-eastern approaches to Hamilton Inlet.		
1235	..do..	USNS Edisto.			Free of ice except scattered bergs and growlers.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
1236	June 16	Ice Patrol plane	47 53	53 00	2 growlers.
1237	do	do	49 27	52 13	Growler.
1238	do	do	49 50	52 54	Do.
1239	do	do	49 54	52 38	Do.
1240	do	do	50 00	52 07	Do.
1241	do	do	50 03	51 36	Do.
1242	do	do	50 25	51 26	Do.
1243	do	do	51 00	49 27	Do.
1244	do	do	51 00	49 48	Do.
1245	do	do	51 05	49 32	Do.
1246	do	USNS Edisto	Eastern approaches to Hamilton Inlet.		Completely closed by heavy field ice.
1247	June 17	Ice Patrol plane	Trinity Bay		2 bergs.
1248	do	do	Bonavista Bay		4 bergs.
1249	do	do	Inside of a line from Cape Fogo to Funk Island to Cape Freels.		40 bergs.
1250	do	do	49 55	52 55	Medium berg
1251	do	do	49 58	54 40	3 bergs.
1252	do	do	50 03	54 58	Small berg.
1253	do	do	50 08	53 25	Do.
1254	do	do	50 08	54 00	Do.
1255	do	do	50 18	54 12	Do.
1256	do	do	50 25	53 45	3 bergs.
1257	do	do	50 35	54 42	Small berg.
1258	do	do	50 40	55 15	5 bergs.
1259	do	do	50 47	51 35	Small berg.
1260	do	Manchester Explorer	50 50	48 40	3 bergs.
1261	do	Ice Patrol plane	50 52	51 35	Small berg.
1262	do	do	50 55	51 26	Do.
1263	do	do	50 55	53 30	Medium berg.
1264	do	do	50 55	53 58	8 bergs.
1265	do	do	50 55	54 38	Small berg.
1266	do	do	51 00	51 03	Do.
1267	do	do	51 00	51 15	Do.
1268	do	do	51 00	51 29	Medium berg.
1269	do	do	51 00	51 38	Do.
1270	do	do	51 02	50 35	Do.
1271	do	do	51 02	53 08	Small berg.
1272	do	do	51 04	50 20	Medium berg.
1273	do	do	51 08	52 22	Small berg.
1274	do	do	51 08	52 55	Do.
1275	do	do	51 09	49 55	Do.
1276	do	do	51 10	50 55	Do.
1277	do	do	51 12	52 58	Do.
1278	do	do	51 13	53 10	Do.
1279	do	do	51 15	51 40	Do.
1280	do	do	51 15	54 45	6 bergs.
1281	do	do	51 23	53 12	Small berg.
1282	do	do	51 24	53 06	Do.
1283	do	do	51 27	52 05	Do.
1284	do	do	51 28	53 15	Do.
1285	do	do	51 30	51 42	Medium berg.
1286	do	do	51 30	51 55	Small berg.
1287	do	do	51 30	52 11	Do.
1288	do	do	51 30	53 00	Do.
1289	do	do	51 32	51 23	Do.
1290	do	do	51 32	52 18	Do.
1291	do	do	51 35	52 25	Do.
1292	do	do	51 35	54 00	13 bergs.
1293	do	do	51 38	52 10	Small berg.
1294	do	do	51 38	53 15	Do.
1295	do	do	51 39	50 20	Do.
1296	do	do	51 39	52 51	Do.
1297	do	do	51 40	51 00	Do.
1298	do	do	51 40	52 30	Do.
1299	do	do	51 42	50 10	Do.
1300	do	do	51 45	52 22	Do.
1301	do	do	51 48	50 26	Do.
1302	do	do	51 50	51 29	Do.
1303	do	do	51 50	51 55	Do.
1304	do	do	51 50	53 15	Do.
1305	do	do	51 52	51 39	Do.
1306	do	do	51 52	51 48	Do.
1307	do	do	51 53	50 30	Medium berg.
1308	do	do	51 55	52 00	Small berg.
1309	do	do	51 55	52 20	Medium berg.
1310	do	do	51 59	51 03	Do.
1311	do	do	52 00	50 31	Small berg.
1312	do	do	52 00	51 15	Do.
1313	do	do	52 02	52 04	Do.
1314	do	do	52 03	51 59	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1315	June 17	Ice Patrol plane.....	50 55	49 21	Growler.
1316	do.....	do.....	51 10	49 35	Do.
			From		
			54 27	57 13	
			to		
			53 56	56 58	
			to		
			53 49	56 27	
			to		
1317	do.....	Hydro.....	53 45	56 00	Field ice limits.
			to		
			54 30	55 33	
			to		
			55 00	56 13	
			to		
			55 17	57 32	
			to		
			56 00	59 15	
1318	June 18	Arthur Cross.....	47 52	52 50	Berg.
1319	do.....	Unknown ship.....	49 06	51 51	Berg and growler.
1320	do.....	USAF plane.....	50 35	53 09	2 bergs.
1321	do.....	Sally Stove.....	51 16	52 00	Berg.
1322	do.....	Arosa Kolm.....	51 34	52 32	Do.
1323	do.....	do.....	51 34	53 02	Do.
1324	do.....	do.....	51 35	51 50	Do.
1325	do.....	do.....	51 38	52 20	Do.
1326	do.....	do.....	51 39	52 25	Do.
1327	do.....	do.....	51 42	52 07	Do.
1328	do.....	Sally Stove.....	From Amour Point to Belle Isle.		Many bergs and bits.
1329	do.....	Arosa Kolm.....	51 34	52 01	Growler.
			From		
			53 45	55 30	
			to		
			53 45	55 55	
			to		
			53 50	56 18	
			to		
1330	do.....	Hydro.....	53 57	56 25	Western boundary field ice.
			to		
			54 01	56 40	
			to		
			53 56	56 58	
			to		
			54 04	57 11	
			to		
			54 16	57 12	
1331	do.....	USNS Edisto.....	Approaches to Indian Harbor.		Belt and patches heavy field ice.
1332	June 19	Arthur Cross.....	46 48	52 56	Berg (same as No. 1017).
1333	do.....	USNS Mission Los Angeles.	48 48	52 24	Berg and 2 growlers.
1334	do.....	do.....	49 08	52 20	Berg.
1335	do.....	do.....	49 30	52 10	Do.
1336	do.....	do.....	50 35	53 19	Do.
1337	do.....	do.....	50 37	53 12	Do.
1338	do.....	do.....	50 39	53 10	2 bergs.
1339	do.....	Mormacpenn.....	50 50	48 40	Do.
1340	do.....	Dunelmia.....	51 08	57 48	Berg.
1341	do.....	do.....	51 08	58 00	Do.
1342	do.....	do.....	51 10	57 40	Do.
1343	do.....	do.....	51 14	57 02	Do.
1344	do.....	do.....	51 15	57 08	Do.
1345	do.....	L'Aventure.....	51 21	49 46	Do.
1346	do.....	do.....	51 28	50 02	Do.
1347	do.....	do.....	51 29	51 15	Do.
1348	do.....	Dunelmia.....	51 29	56 34	Do.
1349	do.....	L'Aventure.....	51 33	50 04	Do.
1350	do.....	Dunelmia.....	Straits of Belle Isle.		Scattered bergs and growlers.
1351	do.....	L'Aventure.....	51 49	51 23	Berg.
1352	do.....	do.....	51 56	51 13	Do.
1353	do.....	do.....	52 02	51 08	Do.
1354	do.....	Concordia.....	52 10	51 30	Do.
1355	do.....	L'Aventure.....	53 07	50 10	Do.
1356	do.....	USNS Edisto.....	Hamilton Inlet.....		Field ice with many bergs and bits.
			From		
1357	do.....	Concordia.....	52 10	51 30	Numerous small growlers.
			to		
			52 22	51 30	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
			From		
			54 29	57 06	
			to		
			54 15	56 44	
			to		
			54 00	56 45	
			to		
			54 00	56 17	
			to		
			53 46	55 45	
			to		
			53 28	55 40	
			to		
			53 00	55 30	
			to		
			53 50	55 30	
			to		
			53 50	54 30	
			to		
1358	June 19	Hydro.....	54 12	54 00	Field ice limits.
			to		
			54 35	54 15	
			to		
			54 40	56 25	
			to		
			54 32	56 40	
			to		
			55 03	57 50	
			to		
			55 23	57 25	
			to		
			55 43	57 45	
			to		
			55 40	58 40	
			to		
			55 55	58 28	
1359	June 20	Ice Patrol plane.....	48 28	53 00	Berg.
1360	do	do.....	48 42	52 57	Do.
1361	do	do.....	49 00	51 07	Do.
1362	do	do.....	49 04	53 30	Do.
1363	do	do.....	49 10	53 28	Do.
1364	do	do.....	49 12	53 24	Do.
1365	do	do.....	49 17	52 20	Do.
1366	do	L'Aventure.....	49 20	52 32	Berg and many growlers.
1367	do	Ice Patrol plane.....	49 22	50 58	Berg.
1368	do	do.....	Off Cape Freels.....		10 bergs.
1369	do	do.....	49 38	52 17	Berg.
1370	do	do.....	From Cape Freels to Fogo Island.		25 bergs.
1371	do	do.....	20 miles northeast of Fogo Island.		5 bergs.
1372	do	do.....	50 05	49 36	Berg.
1373	do	do.....	50 07	53 23	Do.
1374	do	do.....	50 15	50 26	Do.
1375	do	L'Aventure.....	50 16	49 45	Do.
1376	do	Ice Patrol plane.....	50 22	51 12	Do.
1377	do	do.....	50 26	50 40	Do.
1378	do	do.....	50 27	51 12	Do.
1379	do	do.....	50 30	52 10	Do.
1380	do	do.....	50 31	50 48	Do.
1381	do	do.....	50 35	49 34	Do.
1382	do	do.....	50 38	50 57	Berg.
1383	do	do.....	50 40	51 26	Do.
			From		
1384	do	USNS Mission Los Angeles.	50 40	53 20	27 bergs and numerous growlers.
			to		
			52 36	53 42	
1385	do	Ice Patrol plane.....	50 44	48 55	Berg.
1386	do	do.....	50 47	49 45	Do.
1387	do	do.....	50 49	48 36	Do.
1388	do	do.....	50 53	52 03	Do.
1389	do	do.....	50 54	51 07	Do.
1390	do	do.....	50 59	50 45	Do.
1391	do	do.....	51 03	49 54	Do.
1392	do	do.....	51 03	51 14	Do.
1393	do	do.....	51 03	51 43	Do.
1394	do	do.....	51 05	50 55	4 bergs.
1395	do	do.....	51 07	49 45	Berg.
1396	do	do.....	51 13	49 53	Do.
1397	do	do.....	51 17	50 51	Do.
1398	do	Dunelmia.....	52 00	53 35	Do.
1399	do	do.....	52 10	53 15	Do.
1400	do	TWA plane.....	52 10	49 25	3 bergs.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
1401	June 20	Manchester Progress	52 11	52 10	2 bergs.
1402	do	Dunelmia	52 11	53 30	Berg.
1403	do	do	52 15	53 15	Do.
1404	do	Manchester Progress	52 18	51 05	Do.
1405	do	do	52 22	51 10	Do.
1406	do	do	52 30	52 55	Do.
1407	do	L'Aventure	48 41	52 30	Growler.
1408	do	Manchester Progress	Northward from		Scattered growlers and heavy field ice.
			52 30	53 20	
1409	do	Caslon	52 33	51 27	Several growlers.
1410	do	USNS Edisto	53 57	55 56	Many growlers and north and south belts field ice.
			From		
			53 40	55 52	
			to		
1411	do	Hydro	53 55	56 35	Western boundary.
			to		
			54 05	57 05	
			to		
			54 30	57 00	
1412	June 21	Ice Patrol plane	Trinity Bay		2 small bergs.
1413	do	do	Bonavista Bay		11 bergs.
1414	do	USCGC Westwind	49 11	52 42	Small berg.
1415	do	Ice Patrol plane	50 03	50 53	Do.
1416	do	do	50 08	51 45	Do.
1417	do	do	50 13	49 22	Do.
1418	do	do	50 13	51 11	Do.
1419	do	do	50 21	49 46	Medium berg.
1420	do	do	50 25	50 35	Small berg.
			From 3 miles east of South Wolf Island to Southeast Rocks to 1 mile east of White Bear Island to 2 miles east of Cape Harrison		
			to		
			55 30	57 15	
			to		
1421	do	Hydro	55 35	58 00	Eastern boundary field ice.
			to		
			55 25	58 25	
			to		
			55 10	58 34	
			to		
			55 20	59 10	
			to		
			55 30	59 30	
			to		
			55 52	59 35	
1422	do	do	From South Wolf Island to Greedy Island to Independent Harbour to South Stag Island to North Stag Island to Tumbledown Dick Island to Herring Island to Tommy Rocks.		Western boundary field ice.
1423	June 22	Ice Patrol plane	48 35	51 10	Small berg.
1424	do	do	48 40	53 00	Do.
1425	do	do	48 40	53 10	Do.
1426	do	do	48 40	53 18	Do.
1427	do	do	48 50	50 50	Do.
1428	do	do	49 08	52 40	Do.
1429	do	do	49 10	53 10	5 bergs.
1430	do	do	49 23	49 23	Medium berg.
1431	do	do	50 08	49 50	Do.
1432	do	do	50 27	49 40	Small berg.
			From		
1433	do	USCGC Westwind	50 35	52 44	Scattered bergs, bits, and growlers.
			to		
			52 12	52 55	
1434	do	Ice Patrol plane	47 37	53 40	Growler.
1435	do	do	49 06	50 38	Do.
1436	do	do	49 52	50 33	Do.
1437	do	do	49 55	50 27	Do.
			From		
			52 30	53 00	
			to		
1438	do	USCGC Westwind	52 35	52 43	Field ice boundary.
			to		
			53 00	52 50	
1439	do	Hydro	53 35	55 45	North and south patch of field ice 10 miles wide and 15 miles long.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' From	° ' to	
			53 41	56 04	
			53 55	56 30	
			54 07	56 48	
			54 28	56 45	
			54 45	57 00	
1440	June 22	Hydro.....	54 47	57 25	Eastern boundary field ice.
			54 50	57 40	
			55 00	57 45	
			55 06	58 12	
			55 20	58 44	
			55 40	59 30	
			55 51	59 55	
			53 41	56 04	
			53 51	56 40	
			54 00	57 03	
1441	do	do	54 17	57 10	Western boundary field ice.
			Indian Harbour	thence	
			along coast to		
			55 10	59 25	
			55 15	59 45	
			55 30	60 00	
1442	do	do	55 50	60 15	Northwest and southeast patch
			55 22	57 45	of field ice 5 miles wide and 35
1443	June 23	Oscar Gorthon.....	49 50	49 30	miles long.
1444	do	Hydro.....	49 55	50 38	2 bergs.
1445	do	USAF plane.....	50 40	55 10	Berg.
1446	do	do.....	51 00	54 00	Do.
1447	do	do.....	51 10	54 15	Do.
1448	do	do.....	51 23	53 18	Do.
1449	do	Disarfell.....	52 42	54 05	Large berg.
1450	do	Hydro.....			10 bergs.
1451	June 24	USNS Redbud.....	50 21	52 30	Brash ice.
1452	do	Ebba Blumenfeld.....	54 16	53 36	Scattered bergs.
1453	do	do.....	54 18	53 55	2 bergs and several growlers.
1454	do	USNS Edisto.....	Approaches to Hamilton		6 bergs and several growlers.
			Inlet.		Heavy belts field ice becoming
1455	June 25	Ice Patrol plane.....	48 33	51 05	scattered fields.
1456	do	do.....	48 43	50 48	Radar target, probable berg.
1457	do	do.....	48 50	48 38	Do.
1458	do	John W. MacKay.....	49 39	49 12	Drydock berg.
1459	do	do.....	49 43	49 15	Radar target, probable berg.
1460	do	Hydro.....	Notre Dame Bay and		Do.
			White Bay.		Many bergs.
1461	do	do	Northern half	Strait of	
			Belle Isle.		Few bergs.
1462	do	Transatlantic.....	52 20	53 22	15 mile area of large growlers.
1463	do	Hydro.....	50 00	55 00	North and south belt of field ice 8
1464	June 26	John W. MacKay.....	49 39	49 08	miles wide and 25 miles long.
1465	do	Gileannes.....	50 07	49 55	Berg.
			51 54	54 16	Large berg.
1466	do	Ramore Head.....	52 09	52 43	Numerous bergs and growlers.
			52 19	52 12	
1467	do	do.....	52 22	52 22	Berg.
1468	do	do.....	52 23	51 40	Do.
1469	do	do.....	52 28	51 30	Do.
1470	do	do.....	54 02	55 59	Do.
1471	do	USNS Edisto.....	49 39	49 00	Few bergs and brash.
1472	June 27	John W. MacKay.....	49 48	49 25	Berg.
1473	do	do.....	49 38	49 25	Radar target, probable berg.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' "	° ' "	
1474	June 27	Sea Monitor	50 22	52 10	2 bergs.
1475	do	do	50 38	52 20	Berg.
1476	do	do	50 42	52 12	Do.
1477	do	USNS Edisto	Hamilton Inlet		Scattered floes and rotten sea ice.
1478	June 28	Fern	48 20	48 37	Berg.
1479	do	Monarch	48 49	52 12	Do.
1480	do	do	48 50	52 11	Do.
1481	do	John W. MacKay	49 40	49 21	Radar target, probable berg.
1482	do	do	49 42	49 17	Do.
1483	do	Saxonia	51 49	51 00	15 radar targets, probable bergs.
			51 49	52 53	
1484	do	do	51 49	52 52	8 radar targets, probable bergs.
			51 46	53 45	
1485	do	do	51 46	53 45	11 radar targets, probable bergs.
			to Belle Isle.		
1486	do	Hydro	30 miles seaward from George Island.		Scattered patches field ice.
1487	do	USNS Edisto	54 21	57 26	Scattered belts block and floe ice.
			From Cape Makovik		
1488	do	Hydro	55 15	58 15	Eastern boundary field ice.
			to		
			54 25	56 45	
			to Indian Harbour.		
1489	June 29	Ice Patrol plane	47 00	52 56	Small berg.
1490	do	do	49 15	49 20	Medium berg.
1491	do	Monarch	49 28	51 53	Berg.
1492	do	Ice Patrol plane	49 35	48 51	Medium berg.
1493	do	Unidentified plane	49 40	48 24	Berg.
1494	do	Ice Patrol plane	49 52	51 00	Small berg.
1495	do	Monarch	49 57	51 10	Do.
1496	do	Ice Patrol plane	50 00	48 48	Do.
1497	do	Monarch	50 01	51 03	Large berg.
1498	do	Ice Patrol plane	50 02	50 42	Do.
1499	do	BOAC plane	50 07	50 06	Berg.
1500	do	Ice Patrol plane	50 07	51 28	Medium berg.
1501	do	do	50 09	50 00	Do.
1502	do	Kattegatt	50 10	51 40	2 bergs.
1503	do	Ice Patrol plane	50 13	51 30	Small berg.
1504	do	BOAC plane	50 17	50 06	Berg.
1505	do	Ice Patrol plane	50 22	50 25	Small berg.
1506	do	do	50 25	50 15	Medium berg.
1507	do	Capital Airlines	50 53	52 22	Berg.
1508	do	Blairspey	51 39	50 55	Do.
1509	do	Saxonia	In Strait of Belle Isle westward to longitude 57°20' W.		Numerous bergs.
1510	do	Blairspey	51 46	51 12	Berg.
1511	do	Columbia	51 48	53 55	Radar target, probable berg.
1512	do	do	51 49	53 45	Do.
1513	do	do	51 50	53 39	Do.
1514	do	do	51 52	53 58	Do.
1515	do	do	51 53	53 06	3 bergs.
1516	do	do	51 29	53 58	Radar target, probable berg.
1517	do	do	52 02	52 43	2 bergs.
1518	do	do	52 02	53 50	Radar target, probable berg.
1519	do	do	52 18	51 15	Berg.
1520	do	do	52 21	50 58	Do.
1521	do	C. D. Howe	54 44	54 42	Do.
1522	do	USNS Edisto	Hamilton Inlet		Scattered belts block and floe ice.
			From		
			54 27	57 13	
			to		
			54 23	56 30	
			to		
			54 35	56 45	
			to		
			54 40	57 40	
			to		
1523	do	Hydro	54 55	57 35	Field ice boundary.
			to		
			55 10	57 03	
			to		
			55 20	57 40	
			to		
			55 00	57 35	
			to		
			55 08	58 55	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° ' ° ' Hamilton Inlet from		
1524	June 29	Hydro.....	53 36	56 30	Many northwest and southeast belts and patches field ice.
			54 29	56 55	
1525	June 30	Finapulp.....	49 22	49 21	Berg.
1526	do	KIM aircraft.....	50 50	48 56	3 bergs.
1527	do	Sneaton.....	52 06	50 30	Berg and 2 growlers.
1528	do	Unidentified plane.....	52 45	51 30	Berg.
1529	July 1	do	49 25	53 00	12 bergs.
1530	do	do	49 28	53 21	Berg.
1531	do	PAA plane.....	49 50	50 45	Do.
1532	do	Botne.....	49 53	54 40	3 bergs.
1533	do	do	50 12	54 20	Berg.
1534	do	do	50 19	53 35	3 bergs
1535	do	do	50 24	53 05	Berg.
1536	do	Unidentified plane.....	50 46	50 03	Do.
1537	do	USN vessel.....	50 48	50 48	5 bergs.
1538	do	Unidentified plane.....	50 50	50 50	Berg.
1539	do	Slick plane.....	51 20	50 30	Do.
1540	do	do	51 20	50 40	Do.
1541	do	Sneaton.....	51 45	54 57	2 bergs.
1542	do	do	51 47	54 48	Berg.
1543	do	Hedja.....	52 42	50 56	Do.
1544	do	USN vessel.....	53 42	54 30	Do.
1545	do	do	54 36	54 54	18 bergs and 15 growlers.
1546	July 2	USCGC McCulloch.....	50 17	51 21	Berg.
1547	do	do	50 31	50 52	Do.
1548	do	do	50 47	51 17	Berg and several growlers.
1549	do	do	50 58	51 07	2 bergs.
1550	do	do	51 42	50 52	Berg.
1551	do	do	51 46	51 00	Do.
1552	do	do	51 49	51 20	Do.
			From		
1553	do	Homerie.....	51 54	53 43	19 bergs.
			to		
			51 58	51 30	
			From		
1554	do	USCGC McCulloch.....	52 00	51 00	11 bergs.
			to		
			52 38	51 00	
			From		
1555	do	Cleopatra.....	52 22	53 18	21 bergs and numerous growlers.
			to		
			52 40	51 57	
1556	do	Transatlantic.....	52 29	51 07	4 bergs and growlers.
1557	do	Cleopatra.....	52 40	51 57	2 bergs and 1 growler.
1558	do	USCGC McCulloch.....	52 45	51 08	Berg and growler.
1559	do	Cleopatra.....	52 45	51 57	2 bergs.
1560	do	USCGC McCulloch.....	52 55	51 22	Small berg.
1561	do	do	53 00	51 21	2 small bergs.
1562	do	do	53 00	51 17	Growler.
			From		
			53 55	56 53	
			to		
			54 05	56 25	
1563	do	Hydro.....	54 17	56 54	Western boundary of field ice blocking Hamilton Inlet.
			to		
			54 20	57 06	
			to		
			54 27	57 15	
			From		
			53 58	55 55	
			to		
			54 01	56 18	
			to		
			54 17	56 41	
			to		
			54 27	56 48	
			to		
			54 45	56 50	
1564	do	do	54 50	57 22	Eastern boundary of field ice blocking Hamilton Inlet.
			to		
			55 04	57 42	
			to		
			55 01	57 48	
			to		
			55 00	58 10	
			thence along eastern edges of islands to		
			55 04	58 53	

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
			° /	° /	
1565	July 3	Swiss Airlines plane	49 22	51 40	Berg.
1566	do	do	49 35	48 37	Do.
1567	do	do	49 45	49 00	2 bergs.
1568	do	do	49 48	48 10	Berg.
1569	do	do	49 49	49 10	Do.
1570	do	do	49 50	48 10	3 bergs.
1571	do	TWA plane	49 55	50 00	Berg.
1572	do	PAA plane	50 00	47 40	Several bergs.
1573	do	TWA plane	50 00	48 45	Do.
1574	do	Swiss Airlines plane	50 08	50 04	Berg.
1575	do	do	50 09	49 14	Do.
1576	do	do	50 10	51 00	Do.
1577	do	do	50 11	50 20	Do.
1578	do	Unidentified plane	50 12	49 50	6 bergs within 20 mile radius.
1579	do	Swiss Airlines plane	50 12	51 22	Berg.
1580	do	do	50 20	49 30	Do.
1581	do	do	50 32	50 00	Do.
1582	do	SAS plane	51 10	48 10	12 bergs.
1583	do	Homerie	51 44	51 01	Berg.
1584	do	do	51 51	50 54	Do.
1585	do	do	51 56	51 00	Do.
1586	do	do	51 57	51 11	Do.
1587	do	do	52 06	53 25	Do.
1588	do	Benny Skou	52 38	53 15	Do.
1589	do	do	52 40	52 45	Do.
1590	do	do	52 40	53 00	Do.
1591	do	do	52 48	52 56	Do.
1592	do	do	52 54	52 08	Do.
1593	do	do	52 57	52 26	Do.
1594	do	do	53 00	52 40	Do.
1595	do	do	53 09	52 05	Do.
1596	do	do	53 15	51 51	Do.
1597	July 4	TCA plane	49 12	48 17	Do.
1598	do	Transocean plane	49 12	48 47	Do.
1599	do	Fredborg	49 15	48 42	Berg and growler.
1600	do	TWA plane	49 30	49 10	Berg.
1601	do	USNS Marine Carp	From 50 20	to 50 00	Many bergs and growlers.
1602	do	Castel Felice	West coast of Strait of Belle Isle from Flat Island to Green Island.	50 00	Do.
1603	do	do	Strait of Belle Isle	54 44	Do.
1604	do	do	51 36	54 44	Do.
1605	do	do	51 37	55 00	Berg.
1606	do	do	51 38	54 38	Do.
1607	do	do	51 38	54 42	2 bergs.
1608	do	do	51 40	55 05	Berg.
1609	do	do	51 40	55 07	2 bergs.
1610	do	Asia	51 43	52 34	Berg.
1611	do	Castel Felice	51 43	55 02	2 bergs.
1612	do	Asia	51 52	52 34	Berg.
1613	do	do	51 53	52 52	Do.
1614	do	do	51 54	52 41	Do.
1615	do	do	51 55	52 05	Do.
1616	do	do	51 55	52 41	Do.
1617	do	do	51 56	51 55	Do.
1618	do	do	51 57	52 41	Do.
1619	do	do	51 59	51 09	Do.
1620	do	do	52 00	52 02	Do.
1621	do	do	52 01	50 44	Do.
1622	do	do	52 03	50 34	Do.
1623	do	do	52 04	52 12	Do.
1624	do	do	52 05	50 04	Do.
1625	do	do	52 05	50 26	Do.
1626	do	do	52 05	50 41	Do.
1627	do	do	52 16	50 25	Do.
1628	do	do	52 21	50 25	Do.
1629	do	Carrasco	51 33	56 30	Several growlers.
1630	do	Asia	51 47	52 30	Growler.
1631	do	do	52 08	50 25	Do.
1632	do	do	52 09	50 30	Do.
1633	do	do	52 16	50 20	Do.
1634	July 5	KIM plane	49 00	48 05	2 bergs.
1635	do	Stockholm	49 03	48 46	Berg.
1636	do	do	49 20	48 10	Do.
1637	do	BOAC plane	50 10	51 45	Do.
1638	do	Unidentified plane	50 14	51 54	Do.
1639	do	do	50 15	49 35	Do.
1640	do	do	50 15	50 00	Do.
1641	do	do	51 27	50 37	Several bergs.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude		West longitude		Description
			°	'	°	'	
1642	July 5	Castel Felice	51	31	50	51	Berg.
1643	do	do	51	31	51	00	Do.
1644	do	do	51	32	51	28	Do.
1645	do	do	51	40	50	57	Do.
1646	do	Lismoria	52	00	54	05	Do.
1647	do	do	52	04	54	01	Do.
1648	do	do	52	10	53	52	Do.
1649	do	do	52	11	53	58	Berg and growler.
1650	do	do	52	12	53	42	Berg.
1651	do	do	52	14	53	36	Berg and growler.
1652	do	do	52	16	53	48	Berg.
1653	do	do	52	17	53	09	Do.
1654	do	do	52	17	53	27	Do.
1655	do	do	52	23	52	34	Radar target, probable berg.
1656	do	do	52	25	53	39	Berg.
1657	do	do	52	26	52	28	Radar target, probable berg.
1658	do	do	52	30	53	17	Berg.
1659	do	do	52	32	52	50	Radar target, probable berg.
1660	do	do	52	34	51	50	Berg.
1661	do	do	52	41	52	15	Berg and growler.
1662	do	do	52	42	51	16	Berg.
1663	do	do	52	42	52	35	Radar target, probable berg.
1664	do	do	52	43	52	22	Do.
1665	do	do	52	44	52	09	Berg.
1666	do	do	53	01	51	39	Do.
1667	do	do	52	22	53	07	Growler.
1668	do	do	52	27	52	59	Do.
1669	do	do	52	42	52	04	Do.
1670	July 6	Manchester City	52	28	52	48	Berg.
1671	do	do	52	30	52	46	Do.
1672	do	do	52	34	52	23	Do.
1673	do	do	52	43	51	59	Do.
1674	do	do	52	48	51	42	Radar target, probable berg.
1675	do	do	52	48	52	01	Berg.
1676	do	do	52	50	51	31	Radar target, probable berg.
1677	do	do	52	50	51	52	Do.
1678	July 7	Ice Patrol plane	48	53	49	03	Small berg.
1679	do	do	49	20	48	15	Do.
1680	do	do	49	27	47	53	Do.
1681	do	do	49	39	49	10	Do.
1682	do	do	49	43	49	20	Medium berg.
1683	do	USNS Tanner	50	05	51	38	Berg.
1684	do	Ice Patrol plane	50	07	49	24	Small berg.
1685	do	do	50	17	49	33	Medium berg.
1686	do	do	50	24	50	31	Do.
1687	do	do	50	38	50	40	Small berg.
1688	do	do	50	41	50	34	Medium berg.
1689	do	do	50	43	49	23	Do.
1690	do	do	50	44	50	47	Small berg.
1691	do	do	50	50	50	45	Do.
1692	do	do	51	08	50	10	Do.
1693	do	do	51	13	51	17	Do.
1694	do	do	51	18	50	45	Large berg.
1695	do	do	51	27	50	19	Small berg.
1696	do	do	51	27	50	24	Do.
1697	do	do	51	28	49	59	Medium berg.
1698	do	do	51	37	50	17	Do.
1699	do	do	50	53	49	47	Growler.
1700	do	do	51	19	49	39	Do.
1701	July 8	do	48	55	48	56	Small berg.
1702	do	do	49	20	48	10	Do.
1703	do	do	49	30	47	40	Do.
1704	do	TWA plane	50	12	50	40	Berg.
1705	do	USNS Tanner	50	25	52	00	3 bergs.
1706	do	Ice Patrol plane	47	58	53	08	Growler.
1707	July 9	do	48	45	53	19	Small berg.
1708	do	do	48	53	53	36	Do.
1709	do	Oslofjord	48	56	48	52	Berg.
1710	do	Ice Patrol plane	49	06	51	14	Small berg.
1711	do	do	49	16	47	54	Do.
1712	do	do	49	23	53	23	Do.
1713	do	do	49	27	52	56	Do.
1714	do	do	49	32	53	17	Do.
1715	do	do	49	33	52	18	Do.
1716	do	Baron Herries	49	35	49	00	Berg, growler, and bits.
1717	do	Ice Patrol plane	49	35	49	10	Small berg.
1718	do	do	49	36	47	26	Do.
1719	do	do	49	36	48	53	Do.
1720	do	do	49	38	52	14	Do.
1721	do	Tarfala	49	40	49	03	Berg.
1722	do	Poseidon	52	27	53	47	Few bergs and growlers.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1723	July 10	USNS Bondia.....	50 14	51 23	2 bergs and growlers.
1724	do.	do.	50 38	51 18	Widely scattered bergs.
1725	do.	do.	50 54	49 48	Berg.
1726	do.	Ramore Head	51 48	54 53	3 bergs.
1727	do.	do.	52 07	53 37	Berg.
1728	do.	do.	52 08	53 31	Do.
1729	do.	do.	52 11	53 57	Do.
1730	do.	do.	52 14	53 05	Do.
1731	do.	do.	52 15	53 24	Do.
1732	do.	do.	52 15	53 42	Do.
1733	do.	do.	52 17	53 06	Do.
1734	do.	Arosa Kulm.	52 18	50 11	Do.
1735	do.	Ramore Head	52 18	53 33	Do.
1736	do.	do.	52 18	53 52	Do.
1737	do.	do.	52 20	53 00	Do.
1738	do.	do.	52 20	53 25	Do.
1739	do.	do.	52 21	53 45	Do.
1740	do.	Arosa Kulm.	52 25	50 23	Berg and 4 growlers.
1741	do.	Ramore Head	52 26	52 38	Berg.
1742	do.	Arosa Star.	52 28	50 05	Do.
1743	July 11	USNS Preserver.	50 04	51 27	Do.
1744	do.	August Sartori.	51 40	53 52	Do.
1745	do.	do.	51 41	54 15	Do.
1746	do.	do.	51 45	53 49	Do.
1747	do.	do.	51 46	54 07	Do.
1748	do.	do.	51 47	55 07	Do.
1749	do.	Rialto.	51 54	51 06	Radar target, probable berg.
1750	do.	USNS Preserver.	49 12	51 45	Growler.
1751	July 12	Ice Patrol plane.	49 03	48 20	Small berg.
1752	do.	Nova Scotia.	49 08	48 18	Berg.
1753	do.	Kristina Thorden	49 12	48 09	Do.
1754	do.	Ice Patrol plane.	49 42	49 00	Small berg.
1755	do.	do.	49 53	47 33	Do.
1756	do.	USNS Preserver.	51 11	50 47	Berg.
1757	do.	do.	52 00	50 20	Do.
1758	do.	do.	52 37	50 05	Do.
1759	do.	USCGC Evergreen.	48 47	52 56	Growler.
1760	do.	Ice Patrol plane.	49 32	50 26	Do.
1761	do.	do.	49 33	47 19	Do.
1762	do.	Nova Scotia.	49 35	47 10	Do.
1763	do.	Ice Patrol plane.	49 43	48 46	Do.
1764	do.	do.	49 46	48 45	Do.
1765	July 13	USNS Brownson.	49 59	51 20	Berg.
1766	do.	do.	50 59	51 02	Do.
1767	do.	do.	51 01	50 45	Do.
1768	do.	USN ship.	51 25	50 45	Do.
1769	do.	do.	51 46	50 32	Do.
1770	do.	Homerie.	52 35	49 38	Berg and 3 growlers.
1771	do.	do.	52 43	49 40	Berg.
1772	do.	USN ship.	52 48	49 39	Do.
1773	do.	do.	54 53	49 48	Do.
1774	do.	USNS Brownson.	51 00	50 50	Growler.
1775	July 14	Ice Patrol plane.	49 35	49 48	Small berg.
1776	do.	do.	49 52	48 50	Do.
1777	do.	do.	50 05	50 15	Do.
1778	do.	do.	50 10	49 45	Do.
1779	do.	do.	50 18	49 50	Do.
1780	do.	do.	50 22	49 18	Do.
1781	do.	do.	50 30	50 58	Do.
1782	do.	do.	50 38	50 50	Medium berg.
1783	do.	do.	50 39	50 20	Do.
1784	do.	do.	50 42	49 51	Small berg.
1785	do.	do.	50 45	50 22	Do.
1786	do.	do.	50 50	50 18	Do.
1787	do.	do.	50 57	50 12	Do.
1788	do.	do.	51 00	50 30	Medium berg.
1789	do.	do.	51 15	48 45	Small berg.
1790	do.	do.	51 15	50 45	Medium berg.
1791	do.	do.	51 25	49 58	Do.
1792	do.	USCGC Evergreen.	51 34	52 05	Berg.
1793	do.	do.	51 44	52 39	Do.
1794	do.	do.	51 50	52 32	Do.
1795	do.	do.	51 59	52 46	Do.
1796	do.	Hydro.	49 35	49 48	Do.
1797	do.	do.	49 52	48 40	Do.
1798	do.	do.	49 40	48 40	Growler.
1799	July 15	USS Preserver.	51 55	51 30	Berg.
1800	do.	do.	52 05	50 44	Do.
1801	do.	do.	52 10	51 35	Do.
1802	do.	USCGC Evergreen.	52 26	52 15	2 bergs.
1803	do.	do.	52 35	53 30	Numerous bergs.
			53 35	55 37	
1804	do.	do.	54 36	54 10	29 bergs.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1805	July 16	Hydro	49 17	52 36	Berg.
1806	do	do	49 18	52 12	Do.
1807	do	do	49 19	52 29	Do.
1808	July 17	Unidentified aircraft	49 48	48 20	Do.
1809	do	Hydro	52 15	52 17	Do.
1810	do	do	52 16	51 47	Do.
1811	do	do	52 18	51 57	Do.
1812	do	do	52 20	52 16	Do.
1813	do	do	52 29	52 48	Do.
1814	do	do	52 29	51 52	Do.
1815	July 18	Tomoe	50 47	50 40	Do.
1816	do	do	50 47	50 27	Do.
1817	do	do	50 48	50 33	Do.
1818	do	do	50 48	49 55	Do.
1819	do	do	50 49	50 20	Do.
1820	do	do	50 49	50 16	Do.
1821	do	do	50 50	50 48	Do.
1822	July 19	Hydro	52 00	53 50	Do.
1823	do	do	52 11	53 39	Do.
1824	do	do	52 14	53 16	Do.
			Inside line drawn from		
			51 59	53 28	
			to		
1825	July 20	USCG plane	51 27	52 28	30 bergs.
			50 11	53 58	
			51 17	54 25	
			to		
1826	July 21	USCGC Cook Inlet	51 59	53 28	Berg.
1827	do	USCGC Evergreen	48 50	51 59	3 bergs.
1828	do	do	51 51	49 54	Berg.
1829	do	do	52 00	49 40	Do.
			52 14	49 47	
1830	do	USCG plane	Within 15 mile radius of		4 small bergs.
			48 55	52 05	
1831	do	do	49 26	50 53	Berg.
1832	do	do	Within 20 mile radius of		7 small bergs.
			50 53	50 14	
1833	do	Ranenford	49 48	47 55	Berg.
1834	July 24	Hydro	50 00	49 00	Do.
1835	do	do	52 09	51 53	Do.
1836	do	do	53 21	51 56	Do.
1837	July 25	USNS Millicoma	51 50	53 02	Do.
1838	do	do	51 55	53 16	Do.
1839	do	do	51 58	53 10	Do.
1840	do	do	53 33	52 53	Do.
1841	do	do	53 33	53 05	Do.
1842	do	do	54 11	52 42	Do.
1843	do	do	54 15	53 00	Do.
1844	do	do	54 18	53 01	Do.
1845	do	do	54 25	52 58	Do.
1846	July 27	do	52 03	51 05	6 bergs.
1847	July 28	USCG plane	49 03	52 45	Berg.
1848	do	do	49 35	52 30	Do.
1849	do	do	50 35	49 40	Do.
1850	do	do	50 40	50 35	Do.
1851	do	Hydro	50 22	52 44	Do.
1852	July 29	USCG plane	49 00	53 02	Do.
1853	do	Virginia	48 48	50 15	Do.
1854	do	do	49 49	50 15	Do.
1855	July 30	Hydro	50 03	49 52	2 bergs.
1856	do	do	51 03	52 06	3 bergs.
1857	do	do	51 35	52 06	14 bergs.
			to		
1858	do	do	53 15	52 06	4 bergs.
			53 45	52 05	
			to		
1859	do	do	53 50	52 25	6 bergs.
1860	July 31	do	54 00	53 00	
1861	do	do	50 51	53 36	Berg.
1862	do	do	52 20	54 22	Do.
1863	do	do	52 20	53 24	Do.
1864	do	do	52 20	53 10	Do.
1865	do	do	52 22	53 30	Do.
1866	do	do	52 24	54 25	Do.
1867	do	do	52 28	53 33	Do.
1868	do	do	52 33	53 12	Do.
1869	do	do	52 46	53 24	Do.
1870	do	do	52 53	53 34	Do.
			53 00	53 52	Do.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1871	July 31	Hydro.....	53 40	53 10	Many bergs.
			to		
1872	Aug. 1	do.....	54 20	54 50	Berg.
1873	do	do.....	48 20	50 32	Do.
1874	do	do.....	51 00	52 10	Growler.
1875	Aug. 4	do.....	48 16	50 37	Berg.
1876	do	USCG plane.....	48 34	49 58	Do.
1877	do	do.....	48 46	49 39	Do.
1878	Aug. 7	TWA plane.....	50 15	50 46	Do.
1879	do	Hydro.....	50 30	49 05	Do.
1880	do	do.....	51 00	49 50	Do.
1881	Aug. 9	USCG plane.....	53 00	50 42	Do.
1882	do	do.....	48 18	51 00	Do.
1883	do	do.....	50 03	52 41	Do.
1884	do	do.....	50 38	54 04	Do.
1885	do	do.....	50 57	54 03	Do.
1886	do	do.....	50 57	49 00	Do.
1887	do	do.....	51 17	53 20	Do.
1888	do	do.....	51 25	52 56	Do.
1889	do	do.....	52 00	49 40	Do.
1890	do	do.....	49 34	53 12	Growler.
1891	do	do.....	49 38	52 19	Do.
1892	do	do.....	49 44	53 25	Do.
1893	Aug. 10	Hydro.....	50 18	50 57	Berg.
1894	do	do.....	49 58	50 28	Do.
1895	do	do.....	50 26	49 55	Do.
1896	Aug. 11	do.....	50 43	48 45	Do.
1897	do	do.....	49 30	52 30	Do.
1898	do	do.....	50 31	48 31	Do.
1899	do	do.....	51 17	52 00	Do.
1900	do	do.....	52 33	50 42	Do.
1901	do	do.....	52 36	50 15	Do.
1902	Aug. 12	USCGC Bibb.....	52 51	50 43	Do.
1903	do	do.....	52 58	51 34	Do.
1904	do	do.....	53 21	51 28	Do.
1905	do	do.....	53 43	50 48	Do.
1906	Aug. 14	Sandsend.....	54 47	51 12	Do.
1907	do	do.....	51 46	53 00	Do.
1908	do	do.....	52 10	54 52	Do.
1909	do	do.....	52 27	53 27	Do.
1910	do	do.....	52 46	53 09	Do.
1911	do	do.....	52 47	52 40	2 bergs.
1912	do	do.....	52 54	52 19	Berg.
1913	do	do.....	52 57	52 25	Do.
1914	do	do.....	53 00	52 28	Do.
1915	do	do.....	53 05	52 34	Do.
1916	do	do.....	53 30	53 39	Do.
1917	do	do.....	53 53	52 10	Do.
1918	do	Lorna.....	52 38	50 48	Do.
1919	do	do.....	52 39	50 15	Do.
1920	do	do.....	52 40	50 00	Do.
1921	Aug. 15	TWA plane.....	49 55	49 40	Do.
1922	Aug. 16	Unidentified plane.....	50 00	49 50	Do.
1923	do	Ernst Blumenfeld.....	54 37	51 43	Do.
1924	Aug. 17	do.....	54 52	50 42	Do.
1925	do	Tyrone.....	52 45	52 26	Do.
1926	do	do.....	52 48	52 18	Do.
			Within 10 mile radius of		9 bergs.
1927	Aug. 18	Empress of Australia.....	53 09	51 10	Berg.
1928	do	do.....	52 32	53 11	2 bergs.
1929	do	USCG plane.....	52 34	53 13	Berg.
1930	do	do.....	49 08	53 05	Do.
1931	do	do.....	49 09	53 04	Do.
1932	do	do.....	49 09	52 22	Do.
1933	do	do.....	49 34	49 31	Do.
1934	do	do.....	50 05	52 20	Do.
1935	Aug. 19	do.....	50 23	51 30	Do.
1936	do	Hydro.....	51 00	52 25	Do.
1937	do	Heinrich Lorenz.....	54 52	55 13	Do.
1938	do	do.....	54 53	55 02	Do.
1939	do	do.....	54 58	54 47	Do.
1940	do	do.....	54 59	54 48	Do.
1941	Aug. 20	Sally Stove.....	49 23	49 27	Do.
1942	do	OSV Bravo.....	52 32	50 02	Do.
1943	do	do.....	52 39	50 13	Do.
1944	do	Hydro.....	51 00	49 45	Do.
1945	do	L'Aventure.....	52 51	50 05	2 bergs.
1946	Aug. 21	Grootebeer.....	52 08	51 14	Berg.
1947	do	do.....	52 24	50 27	Do.
1948	do	do.....	52 28	49 51	Do.
1949	do	do.....	52 28	51 43	Do.
1950	do	do.....	52 41	51 18	Do.
1951	Aug. 23	Hydro.....	51 52	52 30	Do.
		do.....	49 00	52 00	Berg and growler.

TABLE OF ICE REPORTS, 1955—Continued

No.	Date	Name of vessel	North latitude	West longitude	Description
1952	Aug. 25	Silver Afton	° / 52 12	° / 53 49	Berg.
1953	do.	do.	52 26	53 52	Do.
1954	do.	do.	52 30	54 02	Do.
1955	do.	Beaverglen	51 36	56 37	Do.
1956	do.	do.	51 43	56 15	Do.
1957	do.	do.	51 46	55 33	Do.
1958	do.	do.	51 58	55 43	Do.
1959	do.	do.	52 00	55 29	Do.
1960	Aug. 27	Sunmont	52 40	52 33	Do.
1961	do.	do.	52 41	52 38	Do.
1962	do.	do.	52 42	52 55	Do.
1963	do.	Manchester Mariner	53 15	51 19	Do.
1964	Sept. 3	La Hacienda	51 55	53 42	Do.
1965	do.	do.	52 09	53 44	Do.
1966	do.	do.	52 12	51 55	Do.
1967	do.	do.	52 18	52 52	Do.
1968	do.	do.	52 18	51 38	Do.
1969	do.	do.	52 22	53 17	Do.
1970	do.	do.	52 32	51 46	Do.
1971	do.	do.	52 36	51 51	Do.
1972	do.	do.	52 36	51 47	Do.
1973	do.	USCGC Bibb	52 02	51 49	Do.
1974	do.	do.	52 11	51 53	Do.
1975	do.	do.	52 16	51 10	Do.
1976	do.	do.	52 30	51 14	Do.
1977	do.	do.	52 47	51 43	Do.
1978	do.	do.	52 59	51 04	Do.
1979	do.	do.	53 40	51 23	Do.
1980	do.	do.	53 45	51 13	Do.
1981	Sept. 4	Unidentified plane	49 00	53 20	Do.
1982	do.	do.	52 40	51 40	Group of bergs.
1983	do.	do.	53 40	50 35	Do.
1984	Sept. 9	Hydro.	54 18	55 18	Berg.
1985	Sept. 10	Aurelian	52 30	51 00	Do.
1986	do.	Irene Star	52 10	51 25	Do.
1987	do.	do.	52 21	50 55	Do.
1988	do.	do.	52 27	51 23	Do.
1989	Sept. 23	USCGC Duane	51 55	51 42	Do.
1990	Sept. 24	Unidentified plane	50 31	51 23	Do.
1991	Sept. 26	Hydro.	51 58	55 25	Do.
1992	Sept. 28	PAA plane	50 25	48 45	Do.
1993	do.	TWA plane	50 25	50 52	Do.
1994	Sept. 30	Lufthansa plane	50 04	49 00	Do.
1995	Oct. 2	Hydro.	51 58	55 25	Do.
1996	do.	do.	53 33	55 26	Do.
1997	do.	do.	53 59	56 10	Do.
1998	do.	do.	54 02	56 04	Do.
1999	do.	do.	54 31	56 40	Do.
2000	do.	do.	54 39	56 12	Do.
2001	do.	do.	54 43	57 07	Do.
2002	do.	do.	54 43	57 01	Do.
2003	do.	do.	54 44	56 51	Do.
2004	do.	do.	54 47	56 59	Do.
2005	do.	do.	54 58	57 26	Do.
2006	do.	do.	55 19	57 19	Do.
2007	do.	do.	55 30	57 30	Do.
2008	Oct. 5	PAA plane	50 45	49 50	Do.
2009	do.	West German Airline plane.	50 00	50 20	Do.
2010	Oct. 9	Unidentified plane	51 38	51 35	Do.

PHYSICAL OCEANOGRAPHY OF THE GRAND BANKS AND THE LABRADOR SEA IN 1955¹

By Floyd M. Soule and J. E. Murray
(U. S. Coast Guard)

As in each of the seasons since 1948, in 1955 the USCGC *Evergreen* served as the oceanographic vessel of the ice patrol. Descriptions of the equipment in the laboratory and on deck for carrying out the mission of ice patrol oceanography are to be found in earlier bulletins of this series. The only change in 1955 was the addition of equipment for taking 40-gallon water samples from subsurface levels down to depths of 150 meters. A continuous length of polyethelene plastic pipe was joined to an axial brass pipe and this ended externally at a packed slip joint where connection was made to a gear pump and valving system which permitted priming of the pump and plastic pipe with water from the ship's fire main. The plastic pipe was rove through a light 30-inch diameter fairlead sheave and the intake end lashed to the manila leader between the sinker and the $\frac{5}{32}$ -inch wire rope which is normally used for handling Nansen water bottles. A bathythermograph was suspended from a bridle just below the sinker. It was found necessary to control the plastic pipe by securing it to the wire rope at intervals of about 15 meters as the pipe and wire were paid out. This was accomplished by means of snap hooks lashed to the pipe and snapped around the wire at points where clamps from Nansen water bottles were clamped to the wire. Priming was completed before submerging the intake end of the pipe. Once submerged, pumping continued until all desired levels were sampled. At each sampling level, it was of course necessary to flush the pipe and pump system before taking the sample. Because of the friction head involved the pumping rate was slow with $\frac{3}{4}$ -inch pipe. Trials of a $1\frac{1}{2}$ -inch diameter pipe resulted in little saving in time as the increased pumping rate was overbalanced by the necessity of flushing four times the volume of pipe. Buoyancy of the pipe was a consideration and it was found that about 200 pounds of bronze sinkers were necessary with the $1\frac{1}{2}$ -inch pipe. The method described was found to be feasible in quiet water for depths down to about 150 meters. For deeper samples other methods of collection are more likely to be productive.

¹ To be reprinted as Contribution No. 801 in the Collected Reprints of the Woods Hole Oceanographic Institution.

Partly because of the small quantity and disposition of the ice and partly because of a boiler casualty on the *Evergreen*, only three dynamic topographic surveys were made during the 1955 season and of these only one covered the usual area between Flemish Cap and the Tail of the Grand Banks. As the *Evergreen* left Argentia on 30 March to begin the survey work no bergs had yet been reported except in the northern part of the Grand Banks area and as a result even the major features of the current pattern were unknown. The first survey was planned to explore the probable areas of hazard should bergs enter the area along the northeastern slope of the Grand Banks. Surface temperature reports prior to the beginning of the survey work had been atypically warm and in the neighborhood of the Tail of the Banks lacked the contrast usually present there in the early part of the season. Hence it appeared that Labrador Current water did not extend much to the west of the 50th meridian in that vicinity. The first survey was planned to extend from just west of the Tail of the Banks northward along the eastern slope to about the latitude of Flemish Cap. The work of collection of data began at the southern end of the area at station 5741 on 1 April and progressed northward. On 6 April, shortly after leaving station 5770, it was necessary to heave to to await better weather for continuing the oceanographic work. Work was resumed about 8 hours later. Again on the evening of 7 April after completion of station 5775 it was necessary to heave to on account of weather, this time for 27½ hours. It was necessary to heave to on account of weather a third time, after completion of station 5818, on the evening of 13 April. Work was resumed on the evening of 14 April and no further interruptions occurred. The collection of data was completed on the afternoon of 15 April, 87 stations having been occupied. The *Evergreen* then proceeded to Argentia, arriving there on 16 April.

The *Evergreen* departed Argentia on the morning of 25 April to begin a second survey. This survey was planned to cover the area seaward of the northeastern slope of the Grand Banks from the northern end of the area covered by the first survey northwestward as far as sea ice conditions permitted. The Bonavista triangle was encumbered by ice. For about a week previous to the beginning of the second survey a stationary barometric pressure low had been centered near the eastern edge of the Bonavista triangle and it was surmised that, with the movement of the low northward out of the area, the ice might spread southeastward. Accordingly the survey was begun at the southeastern edge of the Bonavista triangle and progressed southeastward. The work of collection of data began on the morning of 26 April at station 5828. On the afternoon of 28 April a fire which disabled the heating boiler and evaporator left the ship without heat, and the ensuing cold and condensation posed problems of maintaining health and reasonable comfort which dictated the curtailment of the survey.

On 1 May the quiet weather came to an end. By noon it was too rough to carry out the GEK jog pattern and by 1210 it was necessary to heave to. At 0400 the next morning it was possible to proceed toward the next station, 5868, but progress was slow and the GEK program could not be resumed until nearly noon on 2 May upon departure from station 5870. No further extended delays were encountered and the last station, 5877, was completed on the morning of 3 May. The *Evergreen* then proceeded to Argentia, arriving there on 4 May. During the survey 50 stations were occupied.

The *Evergreen* proceeded to Boston, where repairs to the heating boiler and evaporator were accomplished, and then returned to Argentia. On the morning of 1 June departure was taken from Argentia for the purpose of making a survey of the area northward of the Grand Banks. The northern limit of the survey was set at about the latitude of the Strait of Belle Isle and was determined by the southern limit of the sea ice. The eastern limit of the survey was far enough east to include the eastern margin of the Labrador Current and to include an adequate number of deep water stations to serve as reference stations for the numerous sections of anomaly of specific volume necessary for the determination of the dynamic heights of the shallow water stations. The Bonavista triangle was included in this survey and a network extended the surveyed area from the triangle to Flemish Cap. The work of collection of data began at the offshore end of the northernmost section, station 5878, on the morning of 3 June and progressed from north toward south. Very nearly ideal conditions of wind and sea prevailed throughout the survey and no delays were encountered other than that occasioned by the necessity of skirting the edge of field ice along the northern and western edges of the surveyed area. The collection of data at the 106 stations comprising the survey was completed on the morning of 14 June at station 5983. The *Evergreen* then proceeded to Argentia, arriving there on 15 June.

On 17 June the *Evergreen* proceeded to Boston and on 7 July departed Boston to begin the post-season cruise. This was to consist of the occupation of the Bonavista triangle and a section across the Labrador Sea from South Wolf Island, Labrador, to Cape Farewell, Greenland. The work of collection of data began at station 5984 at the off-shore corner of the triangle on the morning of 11 July and progressed without incident, working around the triangle in a counter-clockwise direction to the point of beginning and completing the work of collection for the triangle at station 6013 on the morning of 14 July. South Wolf Island was reached on the morning of 15 July and the work on the section across the Labrador Sea progressed without incident until station 6036 where field ice was encountered about 10½ miles off Cape Farewell. Visual and radar observation confirmed the expectation from the previous several days of on-shore winds that the coastal belt of ice would be compact. Thus the work of collection of

data was completed at station 6036 on the evening of 18 July with the omission of only the last of the planned stations. The *Evergreen* then proceeded to Woods Hole, stopping briefly at Argentia on 22 July to pick up spare oceanographic equipment stored there during the season. Woods Hole was reached on 25 July and oceanographic equipment and personnel were off-loaded to complete the oceanographic field work for 1955. During the post-season cruise 53 stations were occupied.

The oceanographic work was under the supervision of Oceanographer Floyd M. Soule who was assisted by LT John E. Murray. During the third survey LCDR Harry H. Carter also assisted. Other assistants in the observational work were Francis N. Brown, yeoman first class; Elwood C. Gray, aerographer's mate first class; Lewis M. Lawday, aerographer's mate second class; Hugh R. McCartney Jr., aerographer's mate second class; and Bruce M. McCluskey, boat-swain's mate third class.

Of the 296 stations occupied during the season and post-season surveys the 23 stations forming the section across the Labrador Sea were occupied from the surface to as near bottom as was practicable, and at the other 273 stations the observations extended to a depth of about 1500 meters where the depth of water permitted. As in previous years, the intended depths of observation, in meters, were 0, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1000 and thence by 500-meter intervals. The dynamic heights have been referred to the 1000-decibar surface, except for the section across the Labrador Sea where the 1500-decibar surface has been used for reference.

In addition to the usual measurements of temperature and salinity 264 samples were taken during the occupation of the South Wolf Island-Cape Farewell section for subsequent determination of total phosphorus concentration.

Temperatures were measured with deep-sea reversing thermometers. Most of the protected thermometers used were of Richter and Wiese manufacture but a small percentage were made by Negretti and Zambra, G. M. Manufacturing Co., and the Kahl Scientific Instrument Corp. The depths of observation were based on unprotected thermometers made by Richter and Wiese and by Kahl. As described in earlier bulletins of this series a program of intercomparison of the protected thermometers was carried out. From a total of 1994 comparisons, the probable difference between the corrected readings of a pair of thermometers was 0.010°C . As many of the thermometers had recent laboratory comparisons with thermometers tested by the National Bureau of Standards, and as in most cases the temperatures are the means of the corrected readings of a pair of thermometers, it is considered that the observed temperatures listed in the table of oceanographic data have a probable error of about $\pm 0.01^{\circ}\text{C}$.

As in previous years, routine salinity measurements were made with a Wenner salinity bridge. Measurements and tests of the instrument, made prior to the beginning of the 1955 field work, indicated no requirement for the redetermination of its calibration curve. During the routine measurements standardizations were made with water from an oil-sealed carboy of sea water and at least twice during each run a sample of Copenhagen water of the batch P17 was measured as an unknown. At the end of each survey these measurements of Copenhagen water were used to compute such corrections as had to be made to the salinities measured during the survey. For the first survey and the post-season cruise the indicated corrections did not exceed 0.005‰ so no corrections have been made to those salinities. For the second and third surveys corrections of -0.007‰ and $+0.008\text{‰}$ respectively have been applied. The dynamic topographic charts, however, were not redrawn and the dynamic heights shown in figures 14 and 15 consequently are respectively too low and too high by 5.2 and 6 dynamic mm. The relative topography and derived velocities and transports are not affected.

The determinations of the total phosphorus concentration were carried out by personnel of the Woods Hole Oceanographic Institution as described in Bulletin No. 40 of this series.

Figures 13, 14, 15 and 16 show, in chronological order, the current charts resulting from the three surveys made during the season and the post-season occupation of the Bonavista triangle. Figure 13 shows that at the time of the first survey the dynamic heights on the Grand Banks were about normal and the dynamic heights in the valley east of the Labrador Current were nearly normal. The dynamic heights on the seaward margin of the surveyed area were decidedly less than usual with the maximum heights about 30 dynamic centimeters less than usual. Thus, for the most part, the border of the Atlantic Current was outside the surveyed area. The Labrador Current was flowing with normal vigor from the northernmost section to the Tail of the Banks. From this survey it was expected that any bergs which might follow this path would not get further west than about $50^{\circ}40'$ W., south of the Grand Banks before recurving eastward. It was expected, further, that the southernmost point which such bergs might reach would be south of the southern limits of the survey and could only be estimated as about $40^{\circ}20'$ N., occurring at about the 48th meridian. The areas in which bergs might approach the North Atlantic Track Agreement tracks were along the southern margin of the surveyed area between 49° W., and 47° W., and along the eastern margin of the surveyed area between 43° N., and 44° N. Eastward of the Labrador Current north of about $43^{\circ}30'$ N., the gradients in the dynamic topography were so slight that if any bergs reached this area their movements would have been greatly affected by winds and transient wind

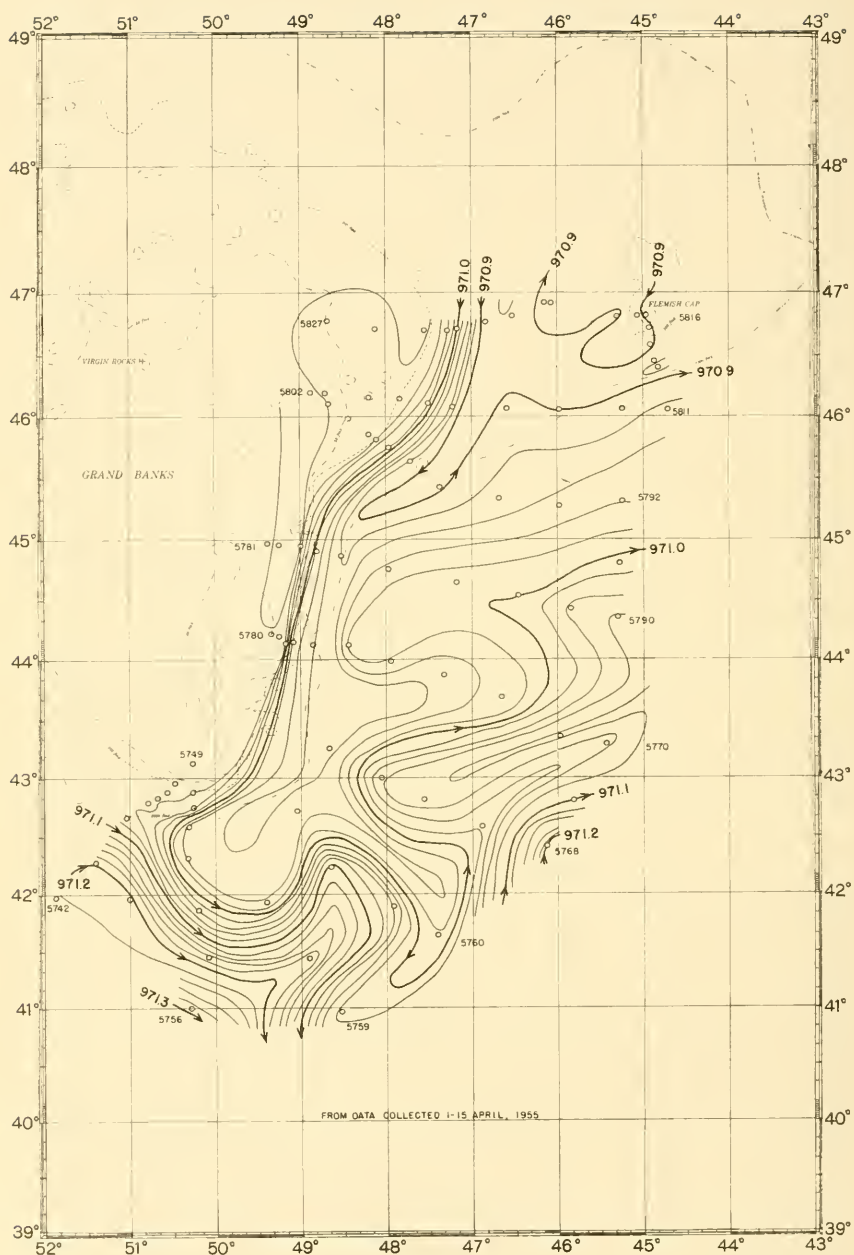


FIGURE 13.—Dynamic topography of the sea surface relative to the 1000-decibar surface from data collected 1-15 April 1955. Oceanographic station positions are indicated and the station numbers given at turning points.

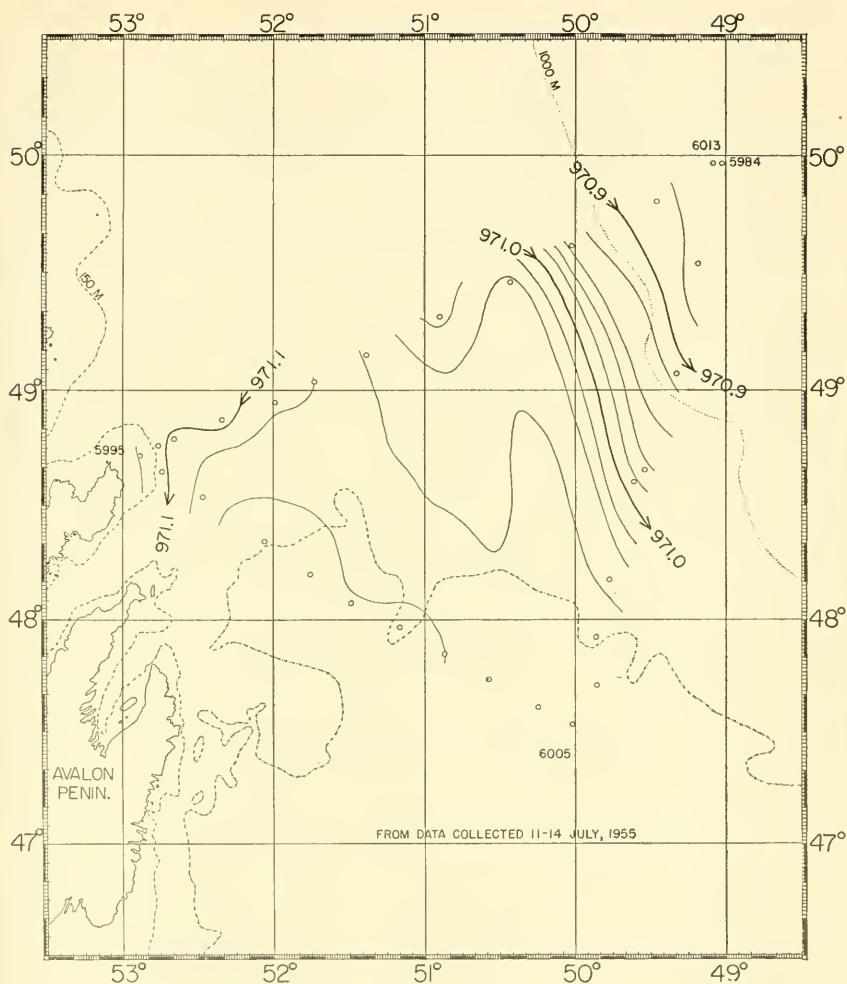


Figure 16.—Dynamic topography of the sea surface relative to the 1000-decibar surface from data collected 11–14 July 1955. Oceanographic station positions are indicated and the station numbers given at turning points.

currents. There was evidence that exceptionally vigorous wind stirring took place prior to this survey and over nearly the entire surveyed area there was a mixed surface layer about 50 meters in thickness. The northward moving water at the extreme western part of the survey is regarded as a compensating eddy associated with an increase in the strength of the Labrador Current. The temperatures support the presumption of an increase in the Labrador Current prior to this survey if it is also assumed that the initially weak current had warmer temperatures than usual and that a strengthening of the current would tend to erase such anomalies. The minimum temperatures observed in the several sections across the Labrador Current were,

from south to north, -0.05 , -0.73 , -0.74 , -1.16 , -1.20 and -1.42° C.

While there is no overlap in surveyed area between the first and second, surveys, comparison of the southern end of figure 14 with the northern part of the first survey presented in figure 13 shows marked similarity from the 970.9-dynamic meter contour near $46^{\circ}10'$ W., westward to the 971.0-dynamic meter contour. Westward of this, however, figure 14 shows a movement westward onto the banks in dynamic heights greater than about 971.01 dynamic meters. Thus the chances of a deep draft berg moving south of the 47th parallel along the eastern edge of the Grand Banks were much less than usual. The swiftest current found during the second survey, both as indicated by GEK and dynamic topography, was in the axis of the Labrador Current as it crossed the first section between stations 5836 and 5837. In an area more than 60 by 150 miles in extent, in the northeastern part of the surveyed area, the steady currents were practically non-existent with a total range in dynamic height of about 4 centimeters.

Figure 15 shows the dynamic topography found during the third survey. Since no previous network survey of the area on the Newfoundland shelf north of the Bonavista triangle has ever been made there exists no basis for comparison of this portion of figure 15 with normal conditions. A few earlier sections, widely spaced, have suggested the presence of an eddy. The principal interest, from a standpoint of practical application of oceanography to Ice Patrol, lay in the core of the Labrador Current near the continental slope and the area southeastward of the Bonavista triangle at and just northward of the latitude of Flemish Cap. Here figure 15, like figure 14, shows a pronounced set onto the Grand Banks. This movement into shoaler depths began as far north as 50° N., but was of practical magnitude only south of 48° N. The colder water of the temperature minimum of the Labrador Current apparently followed this path since the lowest temperature found in the section from Flemish Cap to the Grand Banks was -0.6° C. whereas temperatures as low as -1.48° C. were observed in the southeastern section of the Bonavista triangle. Thus the current in the water which is deep enough to permit passage of a large berg had temperatures warmer than the optimum for lengthy survival. In comparison to figure 14, there was an apparent westward shift of the current pattern in the vicinity of the valley between Flemish Cap and the Grand Banks.

Figure 15 indicates that only such bergs as might cross the 49th parallel west of about $52^{\circ}30'$ W., would follow the western branch of the Labrador Current and that any bergs crossing this parallel between $52^{\circ}30'$ W., and about $49^{\circ}30'$ W., would strand on the northern and northeastern slopes of the Grand Banks. Of those crossing the 49th parallel eastward of $49^{\circ}30'$ W., it was expected that most would recurve eastward north of the latitude of Flemish Cap. Figure 16

shows the dynamic topography found at the Bonavista triangle during the postseason cruise about a month later. During this interval there was an eastward shift of the current pattern along the northwest section of the triangle and this topography was interpreted to mean that any bergs entering the area from the north and crossing the 49th parallel west of about $51^{\circ}30'$ W., would follow the western branch, that those crossing this parallel between $51^{\circ}30'$ W., and $49^{\circ}50'$ W., would strand on the Grand Banks and that those crossing eastward of about $49^{\circ}40'$ W., would recurve eastward and northeastward without reaching latitude 47° N.

In the Grand Banks region Labrador Current water and Atlantic Current water have characteristic temperature-salinity relationships which identify them as water masses. Here also these parent water masses usually mix in a sufficiently constant proportion so that the mixed water can be regarded as a virtual water mass. In 1955 only the first survey was located in the area which has been the source of the T-S data considered in the past. The relationships found during this survey are shown as solid lines in figure 17 and are compared with averages for the 8-year period 1934-41, shown in broken lines. The 1955 T-S curve for Labrador Current water is like that for the 8-year mean but is fresher than the mean below about 400 meters. The mixed water in 1955 was fresher than the mean and slightly warmer throughout. In 1955 the Atlantic Current water was slightly saltier than the mean above 600 meters and fresher below that level. It was also slightly warmer than the mean above about 800 meters. In 1955, level for level, all the water masses were lighter than the mean at all levels. Geographically, the northern sections show normal Labrador Current water. In the southern sections there was some mixing of Labrador Current water with mixed water in the area usually occupied by Labrador Current water. Also the southern sections showed some mixing of mixed water with Atlantic Current water. The Flemish Cap area was occupied by normal mixed water.

For the first and only 1955 survey which extended far enough south to include a portion of the cold wall its position was determined as in other years using as a criterion the horizontal projection of the line along which a temperature of 6° C corresponds to a salinity of 34.95‰ . The area included between this boundary and rhumb lines of the 45th parallel, the 49th meridian from 45° N., to 43° N., and a line from 43° N., 49° W., through 42° N., 47° W., extended to the boundary, was 8.5×10^4 square kilometers. This area, adjusted for the volume transport of the Labrador Current entering the area past the 45th parallel, reduced to 5.16. This adjusted area, A, did not compare well with the 2.30 computed from the prediction formula, $A=6.97(H-5.07)+1.67$ in which A is the adjusted area and H, expressed in feet, is the sea level at Charleston, minus the departure from average sea level at Bermuda $11\frac{1}{2}$ months earlier. As only one

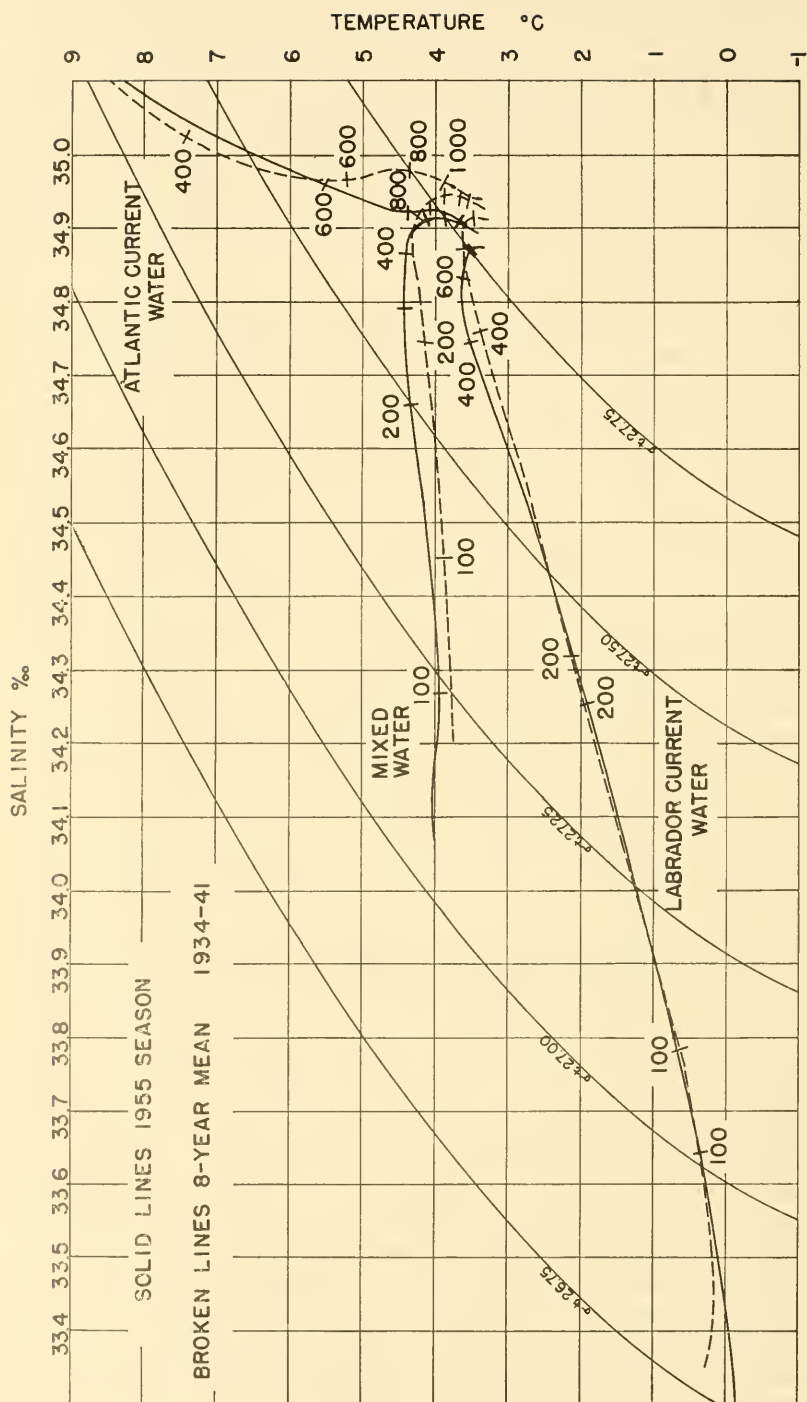


FIGURE 17.—Temperature-salinity relationships for Labrador Current water, Atlantic Current water, and mixed water found in the Grand Banks region. Solid lines show conditions found during the first survey, 1955, and broken lines represent the 8-year mean for the period 1934-41. An approximate depth scale in meters is given.

survey was made in 1955 it is not possible to judge whether the time lag of $11\frac{1}{2}$ months, which has been found in the post-war years, was still effective or whether the prewar lag of $13\frac{1}{2}$ months should have been used.

For a number of years the circulation in the upper layers of the waters in the vicinity of the Grand Banks has been studied in some detail through examination of the distribution of velocity and temperature in selected vertical sections across the Labrador Current. The values of volume transport, mean temperature, minimum observed temperature and heat transport so derived from observations made in 1955 are given in table 1. In this table and in the discussion volume transport is in millions of cubic meters per second, heat transport is in millions of cubic meter degrees Centigrade per second and mean temperature and minimum observed temperature are in degrees Centigrade. Sections T, U, and W are located as follows: T extending southeasterly from about $46^{\circ}20'$ N., $49^{\circ}00'$ W.; U extending easterly from the Grand Banks at about 45° N.; and W extending southerly from the Grand Banks at about 50° W. Sections NW, SW and SE are the sides of a triangle the corners of which are located near Cape Bonavista, Newfoundland, about 50° N., 49° W., and about $47^{\circ}20'$ N., 50° W. Section F extends easterly from the Grand Banks to Flemish Cap and sections G, H and HN radiate seaward from the northeastern shoulder of the Grand Banks successively northward between section F and the Bonavista triangle. The South Wolf Island section extends northeasterly from South Wolf Island, Labrador. Rough approximations to seasonal normal variations have been developed and published for sections T, U and W in bulletin number 36 of this series and for sections NW, SW and SE in bulletin number 39. Such seasonal normal values have been given in table 1. The several occupations of the South Wolf Island section have all taken place at about the same time of year and average values are given for this section in lieu of normals. Sections F, G, H and HN have not been occupied a sufficient number of times to provide either seasonal normals or useful average values.

In the first survey the volume transport of the Labrador Current decreased southward from sections F to T to U as portions recurved northeastward. At section W the increase over section U is considered to be the effect of a recirculatory closed eddy between the supply from the north and the off-lying Atlantic Current. The mean temperature at section T was below normal, at section U about normal and at section W above normal. While at section T the minimum observed temperature was about a quarter of a degree above normal, at sections U and W it was about a half degree warmer than normal. These temperature variations are interpreted as indicating that an increase in flow of colder water from the north was taking place at about the time of the survey.

Table 1.—Summary of velocity sections across Labrador Current occupied in 1955

Section	Volume transport			Mean temperature			Minimum observed temperature			Heat transport		
	1955	Normal	Anomaly	1955	Normal	Anomaly	1955	Normal	Anomaly	1955	Normal	Anomaly
1st Survey:												
F.....	4.58			1.42			-1.40			6.51		
T.....	4.44	3.33	+1.11	1.56	1.95	-0.39	-1.16	-1.40	+0.24	6.94	6.49	+0.45
U.....	3.62	5.31	-1.69	1.49	1.51	-0.02	-0.74	-1.22	+0.48	5.40	8.02	-2.62
W.....	4.32	4.25	+0.07	2.22	2.02	+0.20	-0.05	-0.50	+0.45	9.60	8.58	+1.02
2d Survey:												
HN.....	3.51			1.10			-1.42			3.87		
H.....	4.17			1.48			-1.30			6.15		
G.....	2.75			1.90			-0.98			5.23		
3d Survey:												
NW.....	4.18	3.62	+0.56	1.40	1.14	+0.26	-1.44	-1.69	+0.25	5.86	4.13	+1.73
SW.....	0.35	0.48	-0.13	-0.01	-0.41	+0.40	-1.54	-1.63	+0.09	0.00	-0.20	+0.20
SE.....	3.72	3.09	+0.63	1.82	1.67	+0.15	-1.48	-1.53	+0.05	6.77	5.16	+1.61
HN.....	3.69			2.20			-1.18			8.11		
H.....	3.47			1.89			-1.09			6.57		
G.....	0.99			1.62			-1.20			1.61		
Postseason:												
NW.....	2.79	4.05	-1.26	1.00	1.41	-0.41	-1.66	-1.61	-0.05	2.78	5.71	-2.93
SW.....	0.40	0.62	-0.22	0.51	0.06	+0.45	-1.47	-1.64	+0.17	0.20	0.04	+0.16
SE.....	2.96	3.32	-0.36	1.89	1.98	-0.09	-1.07	-1.53	+0.51	5.60	6.57	-0.97
South Wolf Island	5.02	4.75	+0.27	2.62	2.49	+0.13	-1.66	-1.49	-0.17	13.15	12.35	+0.80

The second survey took place in an area for which no normals are available. A comparison of the volume passing section G with that which was found at section F during the first survey, however, shows a marked decrease in volume of water passing southward between the Grand Banks and Flemish Cap. Further comparison of the volume transport past sections HN, H, and G for the second and third surveys shows a continuation of this trend as well as a seasonally increasing recurvature of water north of the latitude of Flemish Cap. Also a large part of the decrease in volume from sections H to G in both the second and third surveys is attributable to an anomalous set onto the Grand Banks between these sections (see figures 14 and 15).

Table 1 also shows that the volume transport passing the Bonavista triangle during the third survey was greater than normal and with a larger than normal proportion following the eastern branch. At each of the three sides of the triangle the mean temperature was warmer than normal but with the minimum observed temperatures close to normal. In the postseason cruise occupation of the Bonavista triangle the volume transport had dropped off decidedly to subnormal values accompanied by a drop in mean temperature of the Labrador Current passing the NW and SE sections. The minimum observed temperatures dropped to about normal at the NW section and rose to about a half degree above normal at the SE section. At the South Wolf Island section, occupied only a few days later, the minimum observed temperature was the same as that found at the Bonavista triangle, whereas the situation usually found is that of a colder minimum temperature at the Bonavista triangle than at the South Wolf Island section.² The volume transport, mean temperature and

² See Soule, Bush and Murray "International Ice Observation and Ice Patrol Service in the North Atlantic Ocean—Season of 1953" U. S. Coast Guard Bull. No. 39, page 64.

heat transport at the South Wolf Island section were close to average values for the first time in several years. The volume transport was the lowest found since 1948 and approximately the same as found in 1949, the beginning of the seven-year sequence of exceptionally active circulation in the Labrador Sea. The volume transports found in 1955 have been shown schematically in figure 18. The tabulated values of volume of flow have been rounded off to the nearest tenth and in the case of the Bonavista triangle it has been assumed that there was no vertical volume transport across the 1,000-decibar reference surface. This figure will be referred to again after discussion of the Greenland end of the South Wolf Island-Cape Farewell section.

The dynamic topography of the sea surface in the neighborhood of the section from South Wolf Island, Labrador, to Cape Farewell, Greenland, is shown in figure 19. This topography is relative to the 1500-decibar surface, and since it is not supported by an adjacent network of stations much has been inferred from temperature and salinity distribution within the section and from the results of earlier surveys. Figure 20 shows the temperature distribution along this section and figure 21 gives the salinity distribution in the Greenland half of the section. In figure 20 the frigid water of the Labrador Current is apparent over the inner part of the shelf grading to the warmer offshore part of the Labrador Current above the continental slope. This warmer water of greater than 3.3° extends to the bottom at intermediate depths along the slope and between depths of 1,000 and 2,000 meters is traceable seaward as a temperature maximum as far as station 6026. A similar tongue of water warmer than 3.3° is traceable seaward from the Greenland side. The resulting minima at intermediate depths above these maxima include temperatures of from 3.11° to 3.17° thus classifying 1955 as one of the colder years. Of the years for which data are available 1934-39, 1950 and 1954-55 were years when the temperature minimum was about 3.17° . During the other years for which data are available, 1940-41, 1948-49 and 1951-53, the minimum was about 0.10° to 0.15° warmer. At the Greenland end of the section the warmer water was disposed similarly to the distribution found in 1954 and the cross sectional areas between successive isotherms from the 3.5° isotherm to the 6° isotherm were much the same as in 1954 even though the 1955 occupation of the section was about 6 weeks earlier in the summer than the 1954 occupation.

The salinities shown in figure 21 show a general distribution similar to that found in 1954. The extent and magnitude of the salinity maximum, however, are less than in 1954, the highest salinity being only 34.96‰ . There is a possibility that a somewhat higher salinity may have been missed in the interval between stations 6031 and 6032.

As on the Labrador side, the Greenland end of the section showed a decrease from the abnormally active circulation in the Labrador Sea

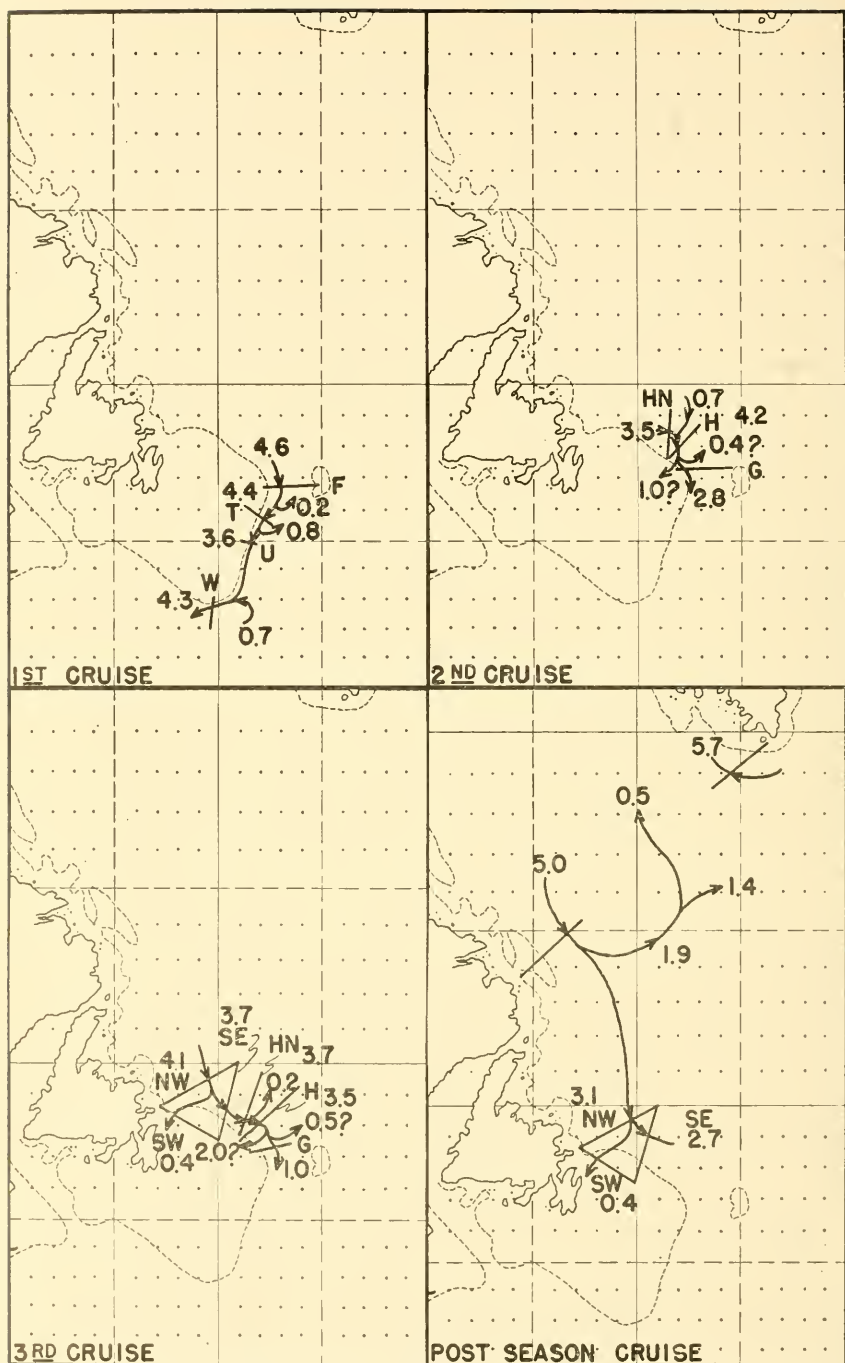


FIGURE 18.—Schematic representation of circulation deduced from sections occupied during 1955. Numerals indicate volume transport in units of $\text{cu.m/sec} \times 10^{-6}$.

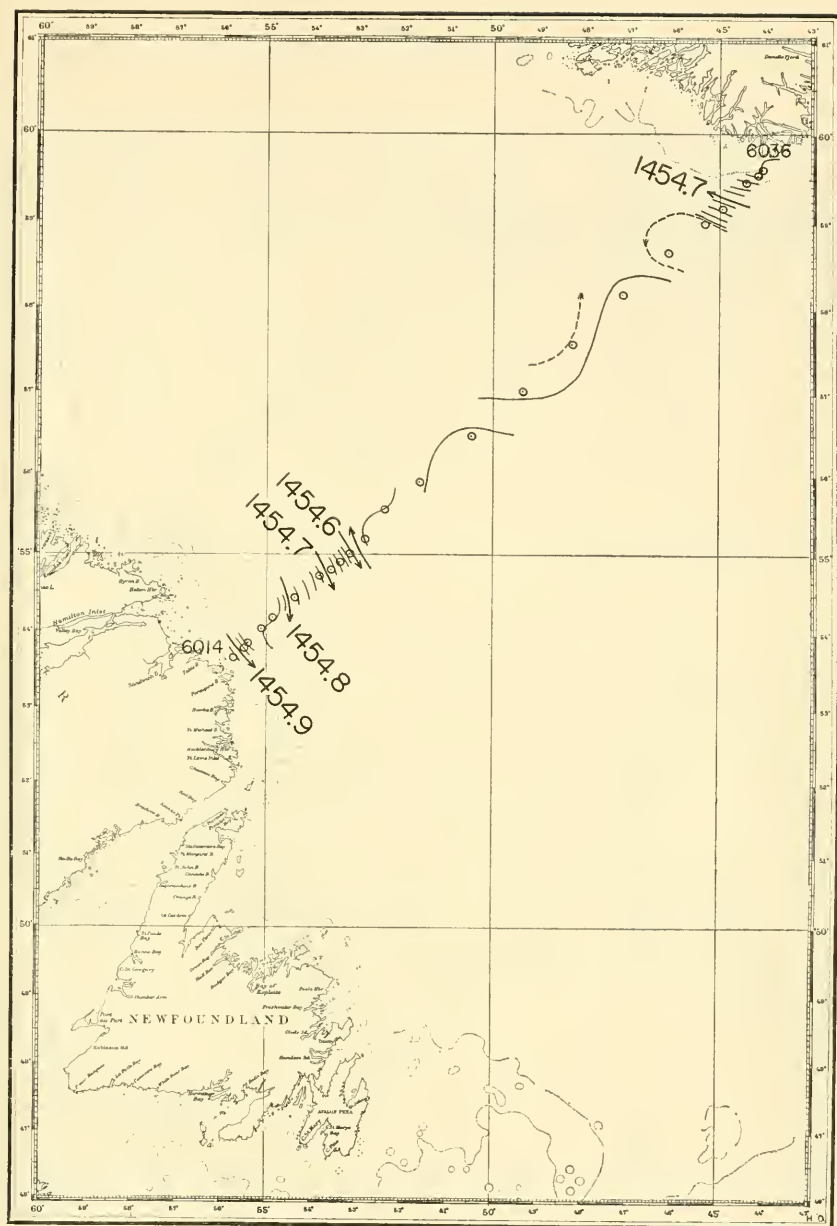


FIGURE 19.—Dynamic topography of the sea surface relative to the 1500-decibar surface from data collected 15–18 July 1955. Oceanographic station positions are indicated and the station numbers given at turning points.

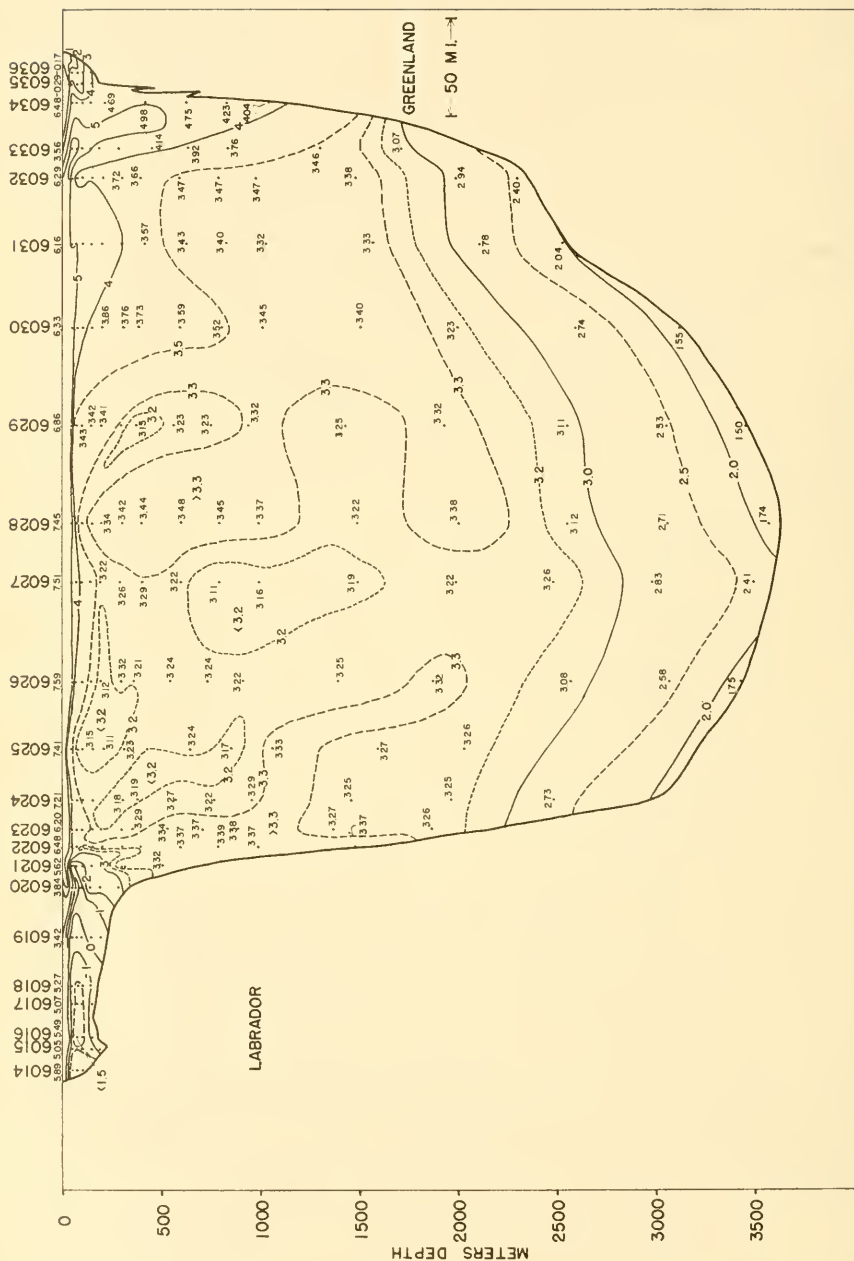


FIGURE 20.—Temperature distribution between South Wolf Island, Labrador, and Cape Farewell, Greenland, 15-18 July 1955.

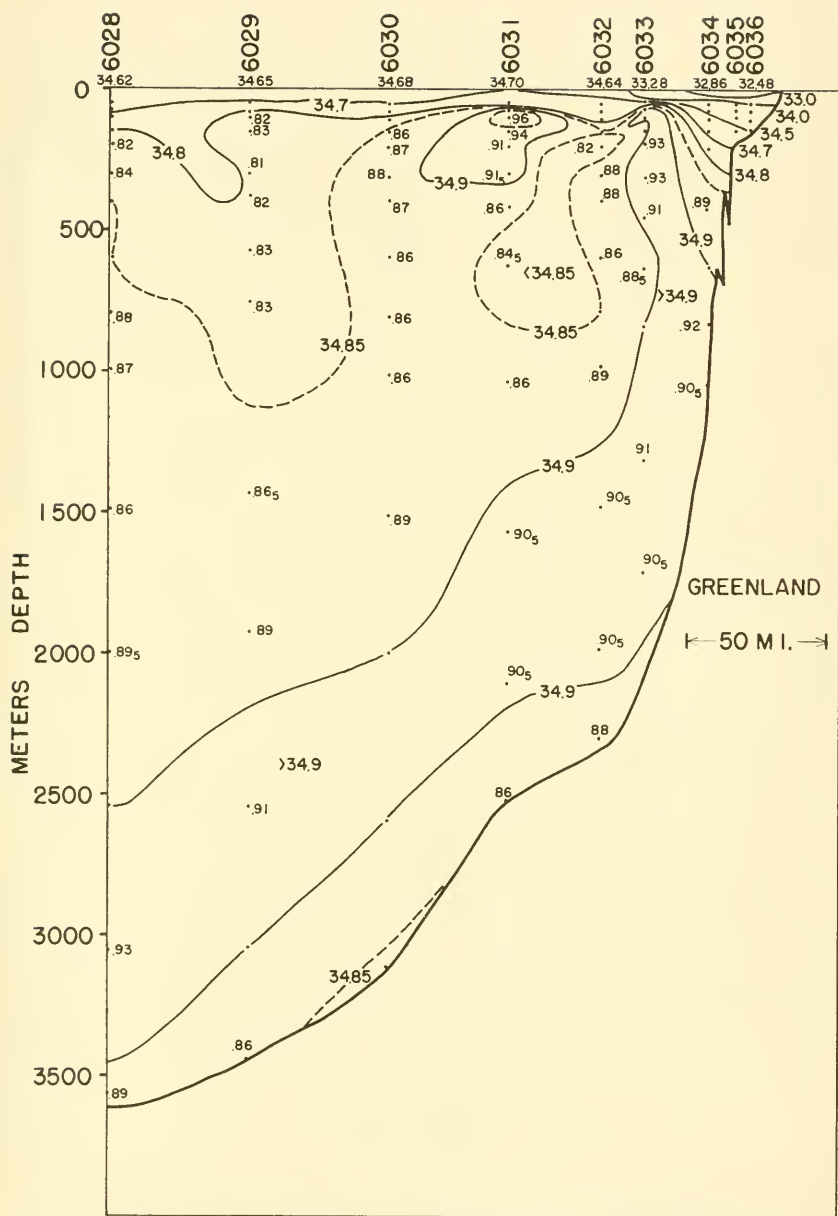


FIGURE 21.—Salinity distribution southwest of Cape Farewell, Greenland, 17-18 July 1955.

which has characterized the last several years. The volume transport of the West Greenland Current was computed to be 5.66 with a mean temperature of 4.74 compared to seasonal normals of 4.55 and 4.65 respectively. The resulting heat transport of 26.85 was 5.69 above the seasonal normal. On the basis of constant mean temperatures of 3.2° and 5.5° for the East Greenland Current and Irminger Current components of the West Greenland Current the volume transport found was made up of 1.87 and 3.79 for these components, being 0.19 and 0.92 greater than the respective seasonal normals. Once more the net transport across the complete section was found to be north-westerly, the amount being 1.24. Again the reference surface selected, 1500 decibars, appears to be about as good as any single level although it would appear that the motionless surface may have been at about 1,700 meters on the Labrador side. The 1500-decibar surface was accepted in constructing the picture of the circulation in the Labrador Sea shown in figure 18.

Again in 1955 samples were taken at all levels at all stations comprising the South Wolf Island-Cape Farewell section for subsequent determination of the concentration of total phosphorus. The distribution found in this section is shown in figure 22. In 1955, as in previous years when total phosphorus has been measured along this section, there were slight maxima at intermediate depths just seaward of the Labrador Current and just seaward of the West Greenland Current. Examination of the total phosphorus-density relationship shows station curves characteristic of the Labrador Current only over the Labrador shelf as far out as station 6019. The constant phosphorus value approached in these curves is about 1.0 $\mu\text{ga/L}$ compared with 1.15 in 1954 and 1.30 in 1952. In the central Labrador Sea the 1955 stations were uniformly lower in phosphorus than in earlier observations and the deep maximum occurring at a potential density of about 27.75 was about 1.1 compared with about 1.2 in 1954. The phosphorus distribution found in 1955 had smaller variations from place to place than previously found and the highest 1955 phosphorus value was 1.30. This occurred at station 6030 which was the only central Labrador Sea station that departed much from the average phosphorus-density relationship. The results of the measurements of total phosphorus concentration are given in tabular form at the end of the usual table of oceanographic data.

SUMMARY

1. The surface circulation in the Grand Banks region found during the 1955 ice patrol season has been discussed in the light of three dynamic topographic surveys, two of which were confined to the north-eastern slope of the Grand Banks north of the latitude of Flemish Cap.

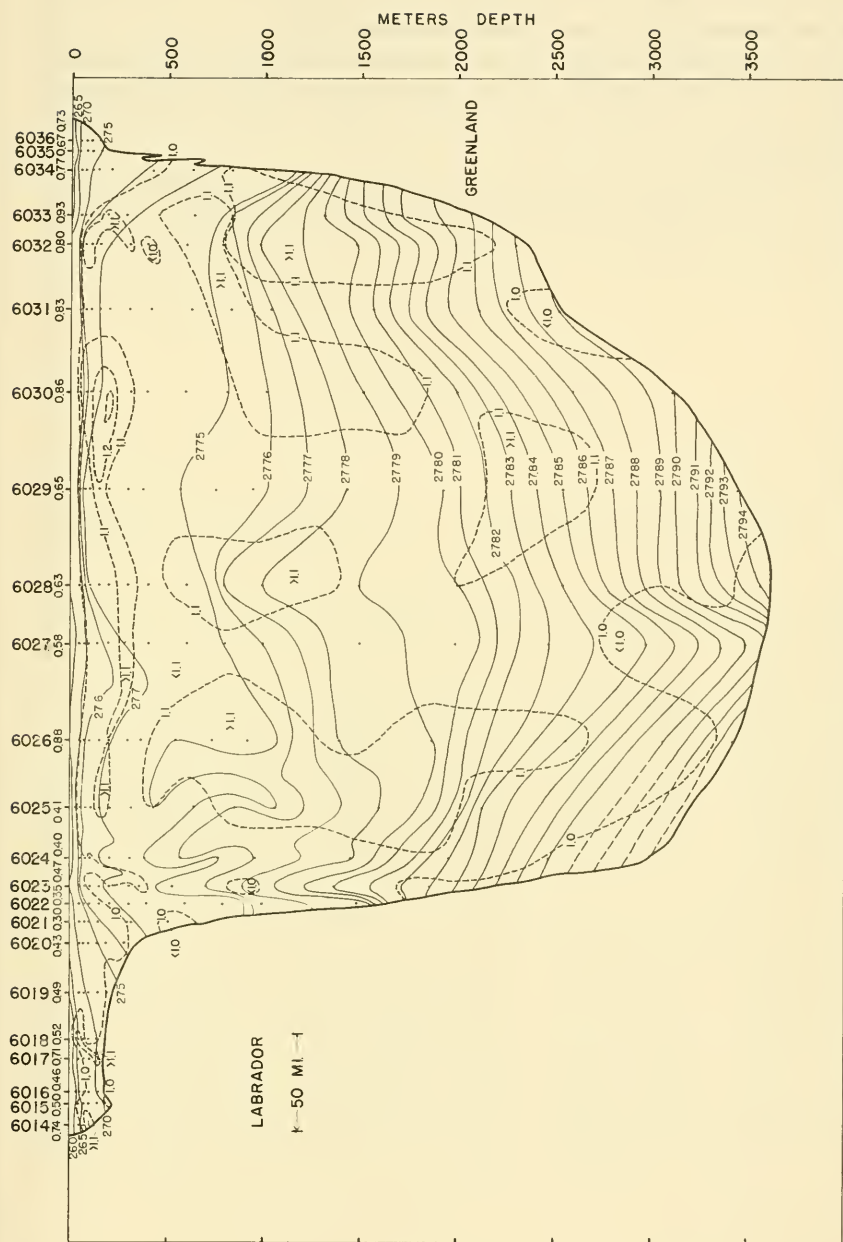


FIGURE 22.—Distribution of total phosphorus between South Wolf Island, Labrador, and Cape Farewell, Greenland, 15-18 July 1955. Concentration is given in microgram-atoms per liter. Solid lines show isentropic surfaces of equal σ_{θ} .

2. A more detailed examination of the Labrador Current in 1955 has been presented on the basis of volume and heat transport and mean and minimum observed temperatures found during the 17 occupations of 11 selected sections. The values found have been compared with seasonal normals where such normals are available.

3. The temperature-salinity relationships of the Labrador Current water, mixed water and Atlantic Current water found during the first 1955 survey have been compared with mean values for the 8-year period 1934-41.

4. Conditions found during the 1955 post-season cruise in the Labrador Sea have been described and the decreased circulation noted.

The data collected during 1955 are tabulated below. The individual station headings give the station number, date, geographical position, depth of water and the dynamic height of the sea surface used in the construction of the dynamic topographic charts shown in figures 13, 14, 15, 16 and 19. The depths of water are rough approximations, being uncorrected sonic soundings based on a sounding velocity of 800 fathoms per second and containing an additional mechanical speed error of about 1/60. Where the depths of scaled values are enclosed in parentheses, the data are based on extrapolated vertical distribution curves of temperature or salinity or both. Asterisks appearing before observed temperatures indicate that these temperatures were determined from the depth of reversal and the corrected reading of an unprotected thermometer. The symbol σ_t signifies 1,000(density-1) at atmospheric pressure and temperature t .

Table of Oceanographic Data
STATIONS OCCUPIED IN 1955

Observed values			Scaled values				σ_t	Observed values			Scaled values				σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters		Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰			
Station 5741; April 1; latitude 41°57' N., longitude 51°00' W.; depth 3,383 m.; dynamic height 971.204.															
0.....	6.71	33.74	0.....	6.71	33.74	26.49	0.....	11.91	35.28	0.....	11.91	35.28	26.84		
23.....	13.23	35.66	25.....	13.25	35.68	26.88	25.....	13.28	35.71	25.....	13.28	35.71	26.90		
46.....	13.43	35.72	50.....	13.40	35.72	26.89	50.....	13.47	35.76	50.....	13.47	35.76	26.90		
70.....	13.40	35.72	75.....	13.40	35.72	26.89	74.....	13.49	35.71	75.....	13.45	35.76	26.91		
93.....	13.27	35.68	100.....	13.20	35.68	26.89	99.....	13.49	35.76	100.....	13.40	35.76	26.92		
139.....	13.42	35.70	150.....	13.30	35.69	26.89	148.....	13.48	35.78	150.....	13.45	35.77	26.92		
185.....	13.02	35.61	200.....	12.85	35.58	26.89	197.....	13.50	35.77	200.....	13.45	35.77	26.92		
278.....	11.84	35.44	300.....	11.10	35.36	27.06	296.....	11.29	35.44	300.....	11.15	35.42	27.10		
336.....	9.90	35.24	400.....	8.25	35.10	27.33	369.....	9.23	35.18	400.....	8.65	35.15	27.31		
481.....	6.83	35.01	600.....	5.55	34.96	27.60	559.....	6.44	35.05	600.....	5.95	35.03	27.60		
610.....	5.46	34.96	800.....	4.15	34.89	27.70	756.....	4.72	34.935	800.....	4.60	34.94	27.69		
781.....	4.16	34.89	1,000..	3.90	34.89	27.73	957.....	4.26	34.95	1,000..	4.20	34.95	27.75		
1,241..	3.73	34.90					1,480..	3.61	34.90						
Station 5742; April 1; latitude 41°58' N., longitude 51°53' W.; depth 3,859 m.; dynamic height 971.224.															
0.....	13.08	35.62	0.....	13.08	35.62	26.87	0.....	3.24	32.90	0.....	3.24	32.90	26.21		
25.....	13.09	35.63	25.....	13.09	35.63	26.87	26.....	1.73	33.12	25.....	1.75	33.11	26.50		
51.....	13.06	35.62	50.....	13.05	35.62	26.87	51.....	0.44	33.32	50.....	0.45	33.32	26.75		
76.....	13.09	35.62	75.....	13.10	35.62	26.87	77.....	0.28	33.40	75.....	0.25	33.39	26.82		
102.....	13.08	35.63	100.....	13.05	35.63	26.88	102.....	2.55	33.80	100.....	2.25	33.76	26.98		
152.....	13.21	35.68	150.....	13.20	35.68	26.89	153.....	3.27	34.12	150.....	3.25	34.11	27.17		
203.....	13.26	35.69	200.....	13.25	35.69	26.89	204.....	2.62	34.18	200.....	2.65	34.17	27.28		
305.....	*10.92	35.41	300.....	11.05	35.43	27.11	306.....	5.25	34.75	300.....	5.10	34.73	27.47		
402.....	9.07	35.16	400.....	9.10	35.16	27.25	372.....	5.00	34.81	400.....	4.90	34.83	27.57		
602.....	4.36	34.72	600.....	4.35	34.72	27.55	564.....	4.44	34.89	600.....	4.30	34.89	27.68		
803.....	4.99	34.98	800.....	5.00	34.98	27.68	760.....	3.60	34.83	800.....	3.60	34.83	27.71		
1,006..	4.33	34.94	1,000..	4.35	34.94	27.72	962.....	3.53	34.85	1,000..	3.55	34.85	27.73		
1,518..	3.64	34.90					1,486..	3.45	34.86						
Station 5744; April 1; latitude 42°39.5' N., longitude 51°02' W.; depth 1,756 m.; dynamic height 971.067.															
0.....	3.24	32.90	0.....	3.24	32.90	26.21	0.....	3.24	32.90	0.....	3.24	32.90	26.21		
26.....	1.73	33.12	25.....	1.75	33.11	26.50	25.....	1.75	33.11	25.....	1.75	33.11	26.50		
51.....	0.44	33.32	50.....	0.45	33.32	26.75	50.....	0.45	33.32	50.....	0.45	33.32	26.75		
77.....	0.28	33.40	75.....	0.25	33.39	26.82	75.....	0.25	33.39	75.....	0.25	33.39	26.82		
102.....	2.55	33.80	100.....	2.25	33.76	26.98	100.....	2.25	33.76	100.....	2.25	33.76	26.98		
153.....	3.27	34.12	150.....	3.25	34.11	27.17	150.....	3.27	34.12	150.....	3.25	34.11	27.17		
204.....	2.62	34.18	200.....	2.65	34.17	27.28	200.....	2.62	34.18	200.....	2.65	34.17	27.28		
306.....	5.25	34.75	300.....	5.10	34.73	27.47	300.....	5.25	34.75	300.....	5.10	34.73	27.47		
372.....	5.00	34.81	400.....	4.90	34.83	27.57	400.....	5.00	34.81	400.....	4.90	34.83	27.57		
564.....	4.44	34.89	600.....	4.30	34.89	27.68	600.....	4.44	34.89	600.....	4.30	34.89	27.68		
760.....	3.60	34.83	800.....	3.60	34.83	27.71	800.....	3.60	34.83	800.....	3.60	34.83	27.71		
962.....	3.53	34.85	1,000..	3.55	34.85	27.73	1,000..	3.53	34.85	1,000..	3.55	34.85	27.73		
1,486..	3.45	34.86						3.45	34.86						

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5745; April 1; latitude 42°47' N., longitude 50°47' W.; depth 1,000 m.; dynamic height 971.068.							Station 5751; April 2; latitude 42°45' N., longitude 50°16' W.; depth 421 m.; dynamic height 971.045.						
0-----	1.42	33.23	0-----	1.42	33.23	26.62	0-----	0.21	33.33	0-----	0.21	33.33	26.77
26-----	1.03	33.31	25-----	1.00	33.31	26.71	25-----	0.14	33.33	25-----	0.14	33.33	26.78
53-----	1.00	33.32	50-----	1.00	33.32	26.72	50-----	-0.05	33.50	50-----	-0.05	33.50	26.92
79-----	5.64	34.01	75-----	5.00	33.97	26.88	75-----	0.10	33.63	75-----	0.10	33.63	27.01
105-----	3.24	33.95	100-----	3.50	33.96	27.03	100-----	0.24	33.72	100-----	0.24	33.72	27.09
157-----	3.44	34.18	150-----	3.40	34.14	27.18	150-----	0.81	33.99	150-----	0.81	33.99	27.26
209-----	5.12	34.64	200-----	5.00	34.57	27.36	200-----	1.23	34.11	200-----	1.23	34.11	27.34
314-----	5.04	34.71	300-----	5.05	34.71	27.46	300-----	1.49	34.19	300-----	1.49	34.19	27.38
400-----	3.83	34.67	400-----	3.85	34.67	27.56							
694-----	4.05	34.74	600-----	4.05	34.74	27.59							
812-----	3.69	34.83	800-----	3.65	34.82	27.70							
992-----	3.59	-----	1,000-----	3.60	34.86	27.74							
Station 5746; April 1-2; latitude 42°50' N., longitude 50°42' W.; depth 640 m.; dynamic height 971.062.							Station 5752; April 2; latitude 42°35' N., longitude 50°19' W.; depth 1,829 m.; dynamic height 970.952.						
0-----	1.38	33.22	0-----	1.38	33.22	26.61	0-----	2.01	33.70	0-----	2.01	33.70	26.95
25-----	0.52	33.30	25-----	0.52	33.30	26.72	24-----	2.01	33.70	25-----	2.00	33.70	26.95
50-----	0.41	33.36	50-----	0.41	33.36	26.78	47-----	2.77	33.87	50-----	2.80	33.89	27.04
75-----	0.41	33.40	75-----	0.41	33.40	26.82	71-----	2.74	34.06	75-----	2.70	34.08	27.19
100-----	0.44	33.50	100-----	0.44	33.50	26.89	95-----	2.34	34.18	100-----	2.25	34.19	27.32
150-----	0.77	33.86	150-----	0.77	33.86	27.16	142-----	1.83	34.28	150-----	1.90	34.30	27.44
209-----	1.13	34.01	200-----	1.13	34.01	27.27	189-----	2.34	34.43	200-----	2.45	34.46	27.52
300-----	1.86	34.26	300-----	1.86	34.26	27.41	284-----	3.31	34.67	300-----	3.40	34.69	27.62
392-----	2.87	34.53	400-----	2.95	34.55	27.55	357-----	3.61	34.76	400-----	3.65	34.78	27.66
534-----	3.59	34.73	(600)-----	3.70	34.78	27.66	542-----	3.70	34.82	600-----	3.65	34.82	27.70
							730-----	3.57	34.83	800-----	3.55	34.84	27.72
							923-----	3.55	34.85	1,000-----	3.55	34.85	27.73
							1,422-----	3.48	34.86				
Station 5747; April 2; latitude 42°52.5' N., longitude 50°35' W.; depth 148 m.; dynamic height 971.073.							Station 5753; April 2; latitude 42°18.5' N., longitude 50°20' W.; depth 2,761 m.; dynamic height 970.951.						
0-----	1.20	33.25	0-----	1.20	33.25	26.66	0-----	2.16	33.64	0-----	2.16	33.64	26.90
25-----	0.95	33.27	25-----	0.95	33.27	26.68	26-----	2.59	33.74	25-----	2.55	33.74	26.94
50-----	0.69	33.30	50-----	0.69	33.30	26.71	53-----	2.56	33.78	50-----	2.55	33.77	26.97
75-----	0.55	33.32	75-----	0.55	33.32	26.74	79-----	2.61	33.94	75-----	2.60	33.91	27.07
100-----	0.28	33.45	100-----	0.29	33.45	26.86	106-----	2.47	34.06	100-----	2.50	34.04	27.18
150-----	0.68	33.82	150-----	0.68	33.82	27.14	157-----	2.49	34.26	150-----	2.50	34.24	27.34
Station 5748; April 2; latitude 42°57' N., longitude 50°29' W.; depth 98 m.; dynamic height 971.070.							210-----	3.26	34.51	200-----	3.10	34.47	27.48
0-----	1.76	33.16	0-----	1.76	33.16	26.54	316-----	3.69	34.73	300-----	3.65	34.70	27.60
26-----	1.06	33.27	25-----	1.05	33.27	26.68	410-----	3.66	34.83	400-----	3.70	34.82	27.70
51-----	0.57	33.32	50-----	0.69	33.32	26.74	616-----	3.56	34.85	600-----	3.55	34.85	27.73
77-----	0.43	33.46	75-----	0.45	33.45	26.85	822-----	3.62	34.89	800-----	3.60	34.89	27.76
							1,030-----	3.44	34.88	1,000-----	3.50	34.88	27.76
							1,552-----	3.43	34.90				
Station 5749; April 2; latitude 43°08' N., longitude 50°16' W.; depth 73 m.; dynamic height 971.075.							Station 5754; April 2; latitude 41°51' N., longitude 50°12' W.; Depth 3,695 m.; dynamic height 971.030.						
0-----	1.59	33.16	0-----	1.59	33.16	26.55	0-----	1.26	33.26	0-----	1.26	33.26	26.65
28-----	1.46	33.22	25-----	1.50	33.21	26.60	24-----	0.64	33.31	25-----	0.60	33.31	26.73
55-----	1.00	33.31	50-----	1.05	33.30	26.70	49-----	0.44	33.33	50-----	0.45	33.33	26.75
							73-----	0.32	33.44	75-----	0.35	33.45	26.86
							98-----	0.40	33.54	100-----	0.45	33.54	26.92
							146-----	0.62	33.81	150-----	0.70	33.83	27.14
							194-----	2.05	34.14	200-----	2.10	34.18	27.32
							292-----	3.20	34.55	300-----	3.30	34.57	27.54
							326-----	3.65	34.66	400-----	4.00	34.77	27.63
							466-----	4.23	34.83	600-----	4.20	34.88	27.69
							591-----	4.18	34.88	800-----	4.20	34.94	27.74
							759-----	4.21	34.95	1,000-----	3.80	34.90	27.75
							1,210-----	3.59	34.88				

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5755; April 2; latitude 41°27' N., longitude 50°06' W.; dynamic height 971.175.						
0	9.63	34.62	0	9.63	34.62	26.74
24	9.95	34.70	25	9.95	34.70	26.75
48	11.50	35.17	50	11.55	35.18	26.83
72	11.97	35.31	75	12.00	35.32	26.86
95	12.10	35.36	100	12.15	35.36	26.86
144	12.29	35.38	150	12.30	35.395	26.86
191	12.49	35.44	200	12.35	35.44	26.88
286	10.37	35.30	300	10.10	35.27	27.17
323	9.68	35.22	400	8.25	35.12	27.36
486	6.57	35.02	600	4.70	34.87	27.63
652	4.21	34.82	800	4.00	34.91	27.74
831	3.99		1,000	3.90	34.92	27.76
1,311	3.77	34.91				

Station 5756; April 3; latitude 41°00' N., longitude 50°17' W.; depth 3,695 m.; dynamic height 971.294.

0	13.50	35.73	0	13.50	35.73	26.87
27	13.50	35.73	25	13.50	35.73	26.87
53	13.51	35.73	50	13.50	35.73	26.87
80	13.52	35.73	75	13.50	35.73	26.87
106	13.51	35.73	100	13.45	35.73	26.88
161	13.30	35.68	150	13.30	35.69	26.88
214	13.28	35.68	200	13.25	35.68	26.88
320	13.22	35.68	300	13.25	35.68	26.88
388	10.97	35.36	400	10.70	35.32	27.10
572	7.25	35.04	600	6.70	34.99	27.47
749	3.61	34.70	800	3.70	34.75	27.64
935	4.05	34.87	1,000	3.90	34.87	27.72
1,398	3.48	34.89				

Station 5757; April 3; latitude 41°56' N., longitude 49°26' W.; depth 3,091 m.; dynamic height 970.967.

0	3.32	33.63	0	3.32	33.63	26.78
26	3.23	33.63	25	3.20	33.63	26.79
53	2.43	33.64	50	2.50	33.64	26.86
79	1.77	33.91	75	1.80	33.87	27.10
106	2.52	34.10	100	2.40	34.07	27.22
157	2.67	34.34	150	2.65	34.31	27.39
210	3.23	34.52	200	3.10	34.49	27.49
316	5.22	34.94	300	5.00	34.89	27.61
443	3.87	34.83	400	4.25	34.86	27.67
663	3.56	34.84	600	3.60	34.83	27.71
883	3.99	34.94	800	3.85	34.90	27.74
1,104	3.63	34.91	1,000	3.80	34.92	27.77
1,658	3.50	34.91				

Station 5758; April 3; latitude 41°27' N., longitude 48°54' W.; depth 3,292 m.; dynamic height 971.193.

0	13.41	35.73	0	13.41	35.73	26.89
25	13.42	35.73	25	13.42	35.73	26.89
49	13.42	35.71	50	13.40	35.71	26.88
74	13.34	35.70	75	13.35	35.70	26.88
99	13.36	35.70	100	13.30	35.70	26.89
148	13.35	35.71	150	13.35	35.71	26.89
197	13.32	35.70	200	13.30	35.70	26.89
296	11.05	35.36	300	10.90	35.34	27.08
384	8.00	34.97	400	7.60	34.95	27.31
580	4.94	34.87	600	4.95	34.88	27.60
778	4.89	35.01	800	4.80	35.01	27.73
976	4.27	34.98	1,000	4.25	34.97	27.76
1,480	3.63	34.91				

Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5759; April 3; latitude 40°58' N., longitude 48°32' W.; depth 3,017 m.; dynamic height 971.017.						
0	6.70	34.15	0	6.70	34.15	26.81
25	6.72	34.15	25	6.72	34.15	26.81
50	6.73	34.15	50	6.73	34.15	26.80
74	6.75	34.16	75	6.75	34.16	26.81
99	6.34	34.32	100	6.25	34.33	27.01
148	5.18	34.50	150	5.20	34.50	27.28
197	5.55	34.70	200	5.55	34.70	27.39
296	3.93	34.62	300	3.95	34.62	27.51
390	5.02	35.01	400	5.05	35.01	27.70
585	4.91	34.985	600	4.85	34.985	27.70
782	4.37	34.93	800	4.35	34.93	27.71
984	3.94	34.92	1,000	3.95	34.92	27.75
1,500	3.57	34.89				

Station 5760; April 4; latitude 41°39.5' N., longitude 47°24' W.; depth 3,932 m.; dynamic height 970.986.

0	6.73	34.00	0	6.73	34.00	26.69
26	6.73	34.02	25	6.70	34.02	26.71
51	6.72	34.02	50	6.70	34.02	26.71
77	8.60	34.68	75	8.50	34.68	26.96
102	5.05	34.37	100	5.15	34.38	27.18
152	5.25	34.61	150	5.25	34.60	27.35
203	5.11	34.74	200	5.10	34.74	27.48
305	4.88	34.85	300	4.90	34.85	27.59
425	4.98	34.96	400	5.00	34.95	27.66
635	4.68	35.00	600	4.80	35.00	27.72
844	4.15	34.97	800	4.25	34.98	27.76
1,054	3.85	34.945	1,000	3.90	34.95	27.78
1,580	3.50	34.92				

Station 5761; April 4; latitude 41°53.5' N., longitude 47°54' W.; depth 3,841 m.; dynamic height 971.056.

0	5.21	33.91	0	5.21	33.91	26.82
26	5.23	33.92	25	5.20	33.92	26.83
51	6.96	34.26	50	6.90	34.25	26.86
77	7.86	34.53	75	7.80	34.51	26.94
102	8.30	34.72	100	8.25	34.71	27.03
152	8.48	34.86	150	8.45	34.86	27.12
203	7.64	34.85	200	7.70	34.85	27.22
305	4.77	34.62	300	4.80	34.62	27.42
393	4.94	34.81	400	4.95	34.82	27.56
584	5.26	35.04	600	5.20	35.04	27.70
770	4.52	34.98	800	4.45	34.97	27.74
971	4.11	34.95	1,000	4.10	34.95	27.76
1,487	3.54	34.90				

Station 5762; April 4; latitude 42°14.5' N., longitude 48°39' W.; depth 3,383 m.; dynamic height 971.107.

0	11.91	35.38	0	11.91	35.38	26.92
25	12.04	35.43	25	12.04	35.43	26.93
51	12.06	35.43	50	12.05	35.43	26.93
76	12.15	35.45	75	12.15	35.45	26.93
102	12.16	35.45	100	12.10	35.45	26.94
153	12.18	35.46	150	12.15	35.46	26.94
204	9.88	35.06	200	10.10	35.09	27.02
306	7.05	34.88	300	7.15	34.88	27.32
424	6.28	35.00	400	6.40	34.98	27.50
633	5.17	35.03	600	5.35	35.03	27.67
842	4.30	34.96	800	4.45	34.97	27.74
1,054	3.98	34.94	1,000	4.05	34.94	27.75
1,589	3.54	34.90				

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5763; April 4, latitude 42°43' N., longitude 49°03' W.; depth 2,652 m.; dynamic height 970.951.							Station 5767; April 5; latitude 42°35' N., longitude 46°54' W.; depth 4,024 m.; dynamic height 971.021.						
0	3.91	33.65	0	3.91	33.65	26.75	0	7.78	34.45	0	7.78	34.45	26.90
25	5.79	33.66	25	3.79	33.66	26.77	25	8.06	34.55	25	8.06	34.55	26.93
50	3.62	33.84	50	3.62	33.84	26.92	49	8.13	34.56	50	8.15	34.56	26.93
75	2.18	34.10	75	2.18	34.10	27.26	74	7.48	34.56	75	7.45	34.56	27.03
100	2.67	34.24	100	2.67	34.24	27.33	99	6.29	34.49	100	6.25	34.49	27.14
150	3.07	34.43	150	3.07	34.43	27.44	147	5.48	34.50	150	5.50	34.50	27.24
201	3.47	34.56	200	3.45	34.56	27.51	196	5.67	34.64	200	5.65	34.64	27.33
301	3.96	34.75	300	3.95	34.75	27.61	295	4.50	34.63	300	4.50	34.63	27.45
399	5.13	34.99	400	5.10	34.99	27.67	363	4.83	34.81	400	4.80	34.84	27.59
599	4.42	34.96	600	4.40	34.96	27.73	545	4.61	34.92	600	4.55	34.94	27.70
800	4.06	34.95	800	4.05	34.95	27.76	724	4.46	34.97	800	4.40	34.97	27.74
998	3.86	34.94	1,000	3.85	34.94	27.77	920	4.18	34.96	1,000	4.05	34.95	27.76
1,490	3.47	34.91					1,422	3.59	34.91				
Station 5764; April 4-5; latitude 43°15' N., longitude 48°41' W.; depth 2,103 m.; dynamic height 970.931.							Station 5768; April 5; latitude 42°25.5' N., longitude 46°06' W.; depth 4,340 m.; dynamic height 971.208.						
0	4.03	33.71	0	4.03	33.71	26.78	0	15.60	36.10	0	15.60	36.10	26.71
25	4.02	33.71	25	4.02	33.71	26.79	26	15.59	36.09	25	15.60	36.09	26.70
50	3.53	33.82	50	3.53	33.82	26.91	50	15.09	35.98	50	15.10	35.98	26.72
76	2.32	34.03	75	2.35	34.03	27.18	76	13.87	35.69	75	13.90	35.69	26.75
101	2.74	34.17	100	2.70	34.17	27.27	100	13.69	35.68	100	13.69	35.68	26.80
151	3.24	34.45	150	3.50	34.45	27.42	152	12.99	35.52	150	13.00	35.52	26.81
202	3.98	34.72	200	3.95	34.71	27.58	202	13.06	35.54	200	13.05	35.54	26.82
303	*3.96	34.81	300	3.95	34.81	27.66	302	8.08	34.65	300	8.15	34.66	27.00
401	4.05	34.89	400	4.05	34.89	27.71				(400)	6.65	34.77	27.31
600	3.66	34.88	600	3.65	34.88	27.74				(600)	5.30	34.92	27.68
799	3.46	34.87	800	3.45	34.87	27.76				(800)	4.75	35.02	27.74
1,000	3.31	34.86	1,000	3.30	34.86	27.77				(1,000)	4.40	34.99	27.75
1,501	3.30	34.87											
Station 5765; April 5; latitude 43°01' N., longitude 48°03' W.; depth 3,338 m.; dynamic height 971.059.							Station 5769; April 5; latitude 42°48' N., longitude 45°48' W.; depth 4,663 m.; dynamic height 971.097.						
0	11.90	35.50	0	11.90	35.50	27.02	0	7.94	34.40	0	7.94	34.40	26.83
22	12.01	35.51	25	12.00	35.51	27.01	27	7.89	34.42	25	7.80	34.42	26.87
44	11.99	35.50	50	11.95	35.50	27.01	54	8.17	34.50	50	8.10	34.49	26.88
67	11.91	35.49	75	11.85	35.49	27.01	81	8.64	34.69	75	8.60	34.65	26.93
89	11.85	35.49	100	11.75	35.47	27.02	107	8.33	34.72	100	8.40	34.71	27.01
133	11.21	35.32	150	10.70	35.22	27.02	162	9.35	35.06	150	9.15	35.02	27.13
177	9.78	35.05	200	9.05	35.02	27.15	215	9.19	35.14	200	9.25	35.13	27.20
266	7.47	34.95	300	5.50	34.70	27.40	322	4.63	34.52	300	5.60	34.65	27.35
298	5.56	34.70	400	4.55	34.74	27.54	422	6.58	34.98	400	6.15	34.90	27.47
451	4.30	34.78	600	4.60	34.94	27.69	628	4.82	34.92	600	5.05	34.92	27.63
608	4.62	34.95	800	4.20	34.94	27.74	831	4.53	34.97	800	4.55	34.96	27.72
776	4.26	34.94	1,000	3.95	34.92	27.75	1,043	4.35	34.98	1,000	4.40	34.98	27.74
1,222	3.66	34.91					1,580	3.67	34.92				
Station 5766; April 5; latitude 42°49' N., longitude 47°34' W.; depth 3,685 m.; dynamic height 971.072.							Station 5770; April 6; latitude 43°17.5' N., longitude 45°26' W.; depth 4,572 m.; dynamic height 971.051.						
0	9.50	34.93	0	9.59	34.93	26.98	0	8.50	34.42	0	8.50	34.42	26.76
27	9.51	34.92	25	9.50	34.92	26.99	25	8.49	34.44	25	8.49	34.44	26.78
54	10.77	35.22	50	10.65	35.19	27.00	49	8.84	34.53	50	8.85	34.52	26.79
82	10.91	35.25	75	10.90	35.25	27.01	74	8.93	34.60	75	8.90	34.60	26.84
108	10.89	35.25	100	10.90	35.25	27.01	98	7.39	34.50	100	7.25	34.50	27.01
163	10.33	35.16	150	10.50	35.19	27.03	148	6.37	34.51	150	6.35	34.52	27.15
217	8.63	35.00	200	9.35	35.05	27.12	197	7.14	34.77	200	7.10	34.77	27.25
325	5.09	34.66	300	5.60	34.71	27.40	295	4.47	34.53	300	4.40	34.53	27.39
411	*5.03	34.79	400	5.05	34.77	27.51	389	3.99	34.57	400	4.00	34.59	27.58
620	4.69	34.95	600	4.70	34.94	27.68	580	4.84	34.92	600	4.80	34.92	27.66
831	4.31	34.96	800	4.40	34.96	27.73	770	4.59	34.96	800	4.55	34.97	27.73
1,046	3.98	34.94	1,000	4.05	34.94	27.75	966	4.42	34.98	1,000	4.35	34.98	27.75
1,596	3.40	34.89					1,466	3.61	34.905				

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5771; April 6; latitude 43°21.5' N.; longitude 45°58' W.; depth 4,663 m.; dynamic height 971.087.							Station 5775; April 7; latitude 44°08' N.; longitude 48°27' W.; depth 3,475 m.; dynamic height 970.982.						
0	8.19	34.44	0	8.19	34.44	26.82	0	4.99	33.90	0	4.99	33.90	26.83
27	8.21	34.43	25	8.20	34.43	26.81	26	5.14	33.94	25	5.10	33.93	26.84
53	8.37	34.45	50	8.35	34.44	26.80	51	5.66	34.10	50	5.60	34.09	26.90
80	9.05	34.71	75	9.00	34.69	26.89	77	6.97	34.40	75	6.95	34.38	26.95
106	8.68	34.70	100	8.80	34.71	26.94	103	6.46	34.46	100	6.55	34.46	27.08
160	5.22	34.40	150	5.60	34.44	27.18	153	3.32	34.27	150	3.35	34.27	27.29
212	4.50	34.42	200	4.60	34.41	27.27	205	3.43	34.47	200	3.40	34.45	27.43
318	5.91	34.73	300	5.85	34.67	27.33	308	5.35	34.93	300	5.35	34.93	27.59
			(400)	5.65	34.83	27.48	282	5.35	34.93	400	5.15	34.97	27.66
			(600)	4.90	34.94	27.66	442	5.02	34.99	600	4.50	34.97	27.73
			(800)	4.65	34.99	27.73	615	4.43	34.97	800	3.90	34.93	27.76
			(1,000)	4.40	34.98	27.74	788	3.94	34.93	1,000	3.70	34.91	27.77
							1,250	3.43	34.89				
Station 5772; April 7; latitude 43°41.5' N.; longitude 46°39' W.; depth 4,298 m.; dynamic height 970.967.							Station 5776; April 9; latitude 44°08' N.; longitude 48°52' W.; depth 1,920 m.; dynamic height 970.944.						
0	6.14	34.24	0	6.14	34.24	26.95	0	-0.30	33.12	0	-0.30	33.12	26.62
26	6.14	34.24	25	6.10	34.24	26.96	26	1.18	33.58	25	1.15	33.57	26.91
52	6.17	34.27	50	6.15	34.26	26.97	52	1.24	33.65	50	1.25	33.69	26.99
78	6.30	34.39	75	6.30	34.37	27.04	78	2.39	33.90	75	2.25	33.87	27.07
104	6.27	34.58	100	6.30	34.57	27.20	104	2.97	34.29	100	2.90	34.24	27.31
155	4.28	34.44	150	4.40	34.45	27.33	155	3.39	34.48	150	3.35	34.47	27.45
207	3.05	34.40	200	3.10	34.40	27.42	207	2.57	34.46	200	2.60	34.46	27.51
311	4.64	34.81	300	4.55	34.78	27.57	311	3.66	34.75	300	3.55	34.73	27.63
364	4.90	34.88	400	4.80	34.91	27.65	405	3.89	34.85	400	3.90	34.85	27.70
553	4.47	34.97	600	4.40	34.97	27.74	605	3.62	34.85	600	3.60	34.85	27.73
746	4.15	34.97	800	4.05	34.96	27.77	804	3.66	34.88	800	3.65	34.88	27.74
943	3.78	34.92	1,000	3.75	34.92	27.77	1,008	3.45	34.865	1,000	3.45	34.87	27.76
1,455	3.55	34.915					1,520	3.32	34.86				
Station 5773; April 7; latitude 43°52' N.; longitude 47°20' W.; depth 4,107 m.; dynamic height 970.949.							Station 5777; April 9; latitude 44°09' N.; longitude 49°05' W.; depth 609 m.; dynamic height 970.982.						
0	4.07	33.95	0	4.07	33.95	26.96	0	-0.70	33.05	0	-0.70	33.05	26.58
25	4.07	33.95	25	4.07	33.95	26.96	25	-0.70	33.06	25	-0.70	33.06	26.59
50	4.04	33.95	50	4.04	33.95	26.96	50	-0.65	33.08	50	-0.65	33.08	26.61
75	4.02	33.95	75	4.02	33.95	26.97	75	-0.48	33.41	75	-0.48	33.41	26.87
100	2.13	34.07	100	2.13	34.07	27.24	101	-0.06	33.57	100	-0.05	33.57	26.98
150	2.60	34.30	150	2.60	34.30	27.38	150	0.63	33.90	150	0.65	33.90	27.20
200	3.31	34.58	200	3.31	34.58	27.54	201	1.18	34.13	200	1.15	34.12	27.35
300	4.27	34.83	300	4.27	34.83	27.64	302	2.55	34.50	300	2.50	34.49	27.54
352	4.90	34.92	400	4.70	34.93	27.67	403	3.04	34.62	400	3.05	34.62	27.60
565	4.21	34.94	600	4.15	34.94	27.74	589	3.64	34.80	600	3.65	34.81	27.69
778	3.96	34.93	800	3.95	34.93	27.75							
991	3.62	34.905	1,000	3.60	34.90	27.77							
Station 5774; April 7; latitude 44°00' N.; longitude 47°57' W.; depth 3,870 m.; dynamic height 970.979.							Station 5778; April 9; latitude 44°09.5' N.; longitude 49°11' W.; depth 161 m.; dynamic height 971.071.						
0	6.10	34.27	0	6.10	34.27	26.99	0	-0.52	33.17	0	-0.52	33.17	26.67
25	6.01	34.26	25	6.01	34.26	26.99	25	-0.55	33.20	25	-0.55	33.20	26.70
49	6.09	34.28	50	6.10	34.28	26.99	50	-0.54	33.33	50	-0.54	33.33	26.80
74	6.20	34.32	75	6.20	34.32	27.01	75	-0.30	33.46	75	-0.30	33.46	26.90
98	5.99	34.45	100	5.90	34.45	27.15	100	-0.29	33.47	100	-0.29	33.47	26.91
147	4.50	34.37	150	4.50	34.37	27.26	145	-0.28	33.47	150	-0.30	33.47	26.91
196	5.09	34.62	200	5.10	34.63	27.39							
294	4.32	34.71	300	4.35	34.73	27.55							
372	5.43	34.99	400	5.25	34.98	27.65							
562	4.31	34.92	600	4.20	34.92	27.73							
753	3.94	34.93	800	3.90	34.93	27.76							
946	3.78	34.915	1,000	3.75	34.91	27.76							
1,440	3.41	34.89											
Station 5779; April 9; latitude 44°11.5' N.; longitude 49°16' W.; depth 86 m.; dynamic height 971.072.													
0	-0.43	33.12	0	-0.43	33.12	26.63	0	-0.43	33.12	0	-0.43	33.12	26.63
26	-0.49	33.28	25	-0.50	33.28	26.76	26	-0.49	33.28	25	-0.50	33.28	26.76
51	-0.49	33.32	50	-0.50	33.32	26.79	51	-0.49	33.32	50	-0.50	33.32	26.79
72	-0.39	33.40	75	-0.40	33.41	26.87	72	-0.39	33.40	75	-0.40	33.41	26.87

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5780; April 9; latitude 44°13' N., longitude 49°22' W.; depth 57 m.; dynamic height 971.078.								Station 5785; April 9; latitude 44°51.5' N., longitude 48°33' W.; depth 2,469 m.; dynamic height 970.922.							
0	—0.41	33.12		0	—0.41	33.12	26.63	0	3.46	33.80		0	3.46	33.80	26.90
25	—0.49	33.12		25	—0.49	33.12	26.63	25	3.38	33.81		25	3.38	33.81	26.92
45	—0.50	33.17		50	—0.50	33.18	26.68	49	3.21	33.82		50	3.20	33.82	26.95
								74	2.09	34.20		75	2.10	34.02	27.20
								98	2.19	34.20		100	2.20	34.20	27.34
								147	2.83	34.46		150	2.90	34.47	27.50
								197	4.02	34.70		200	4.05	34.71	27.57
								295	4.67	34.92		300	4.65	34.92	27.68
								384	4.49	34.94		400	4.45	34.94	27.71
								575	4.01	34.92		600	3.95	34.92	27.75
								765	3.67	34.89		800	3.65	34.89	27.75
								934	3.49	34.88		1,000	3.45	34.88	27.76
								1,472	3.36	34.88					
Station 5781; April 9; latitude 44°59' N., longitude 49°24' W.; depth 73 m.; dynamic height 971.077.															
0	—0.34	33.06		0	—0.34	33.06	26.57								
25	—0.53	33.07		25	—0.53	33.07	26.59								
51	—0.59	33.10		50	—0.60	33.10	26.61								
Station 5782; April 9; latitude 44°58' N., longitude 49°16' W.; depth 110 m.; dynamic height 971.081.								Station 5786; April 10; latitude 44°45.5' N., longitude 47°59' W.; dynamic height 970.966.							
0	—0.24	33.04		0	—0.24	33.04	26.56	0	5.80	34.17		0	5.80	34.17	26.95
26	—0.53	33.05		25	—0.55	33.05	26.58	25	5.76	34.17		25	5.76	34.17	26.95
52	—0.57	33.05		50	—0.55	33.05	26.58	50	5.76	34.17		50	5.76	34.17	26.95
77	—0.58	33.06		75	—0.60	33.06	26.85	76	5.40	34.16		75	5.40	34.16	26.98
93	—0.60	33.07		(100)	—0.60	33.07	26.59	101	5.59	34.46		100	5.60	34.46	27.20
								151	4.61	34.50		150	4.65	34.50	27.34
								202	4.47	34.60		200	4.45	34.60	27.44
								303	5.18	34.91		300	5.15	34.90	27.60
								409	4.89	34.96		400	4.95	34.96	27.67
								614	3.93	34.90		600	4.00	34.90	27.73
								817	3.79	34.90		800	3.80	34.90	27.75
								1,024	3.53	34.895		1,000	3.55	34.90	27.77
								1,542	3.31	34.88					
Station 5783; April 9; latitude 44°57' N., longitude 49°02' W.; depth 696 m.; dynamic height 971.089.								Station 5787; April 10; latitude 44°38' N., longitude 47°12' W.; depth 3,749 m.; dynamic height 970.990.							
0	—0.42	32.94		0	—0.42	32.94	26.49	0	5.21	34.00		0	5.21	34.00	26.88
25	—0.74	32.98		25	—0.74	32.98	26.53	23	5.23	34.02		25	5.23	34.02	26.89
51	—0.74	33.00		50	—0.75	33.00	26.55	47	5.41	34.09		50	5.40	34.10	26.94
76	—0.68	33.08		75	—0.70	33.08	26.61	70	5.56	34.15		75	5.50	34.15	26.96
101	—0.52	33.32		100	—0.50	33.31	26.78	93	5.19	34.14		100	4.90	34.13	27.01
152	—0.19	33.52		150	—0.20	33.52	26.95	140	3.51	34.06		150	3.85	34.14	27.14
203	—0.05	33.60		200	—0.05	33.59	26.99	196	5.87	34.68		200	5.85	34.69	27.34
304	1.40	34.16		300	1.35	34.14	27.35	279	5.04	34.80		300	4.95	34.83	27.56
401	3.35	34.70		400	3.35	34.70	27.63	345	4.72	34.90		400	4.40	34.89	27.67
602	3.70	34.84		600	3.70	34.84	27.71	526	3.78	34.87		600	3.65	34.87	27.74
								712	3.55	34.87		800	3.50	34.88	27.76
								900	3.49	34.89		1,000	3.45	34.89	27.77
								1,387	3.32	34.90					
Station 5784; April 9; latitude 44°54.5' N., longitude 48°48' W.; depth 1,829 m.; dynamic height 970.982.								Station 5788; April 10; latitude 44°32' N., longitude 41°28' W.; depth 3,749 m.; dynamic height 970.998.							
0	—0.19	33.06		0	—0.19	33.06	26.57	0	7.15	34.23		0	7.15	34.23	26.81
24	—0.43	33.21		25	—0.45	33.21	26.71	26	7.11	34.23		25	7.10	34.23	26.82
48	—0.17	33.46		50	—0.10	33.48	26.90	51	7.10	34.25		50	7.10	34.25	26.84
72	1.18	33.76		75	1.50	33.79	27.06	77	7.68	34.56		75	7.65	34.53	26.97
95	2.41	33.94		100	2.30	33.94	27.12	103	6.27	34.62		100	6.45	34.62	27.22
143	0.87	33.94		150	1.15	33.98	27.23	153	5.44	34.56		150	5.50	34.56	27.29
191	2.71	34.38		200	2.75	34.40	27.45	205	3.93	34.42		200	4.00	34.52	27.43
286	2.96	34.57		300	3.15	34.62	27.59	308	4.72	34.74		300	4.70	34.72	27.51
327	3.61	34.74		400	3.70	34.80	27.68	391	4.61	34.84		400	4.60	34.85	27.62
493	3.74	34.83		600	3.65	34.83	27.70	588	4.44	34.945		600	4.40	34.95	27.72
659	3.58	34.83		800	3.50	34.86	27.75	787	4.32	34.975		800	4.30	34.97	27.75
839	3.47	34.86		1,000	3.40	34.86	27.76	992	3.95	34.94		1,000	3.95	34.94	27.76
1,316	3.34	34.86						1,521	3.53	34.92					

Table of Oceanographic Data—Continued
STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5789; April 10; latitude 44°26.5' N., longitude 45°50' W.; depth 3,841 m.; dynamic height 971.042.								Station 5793; April 11; latitude 45°17.5' N., longitude 45°59' W.; depth 3,475 m.; dynamic height 970.948.							
0	8.13	34.45		0	8.13	34.45	26.85	0	6.25	34.21		0	6.25	34.21	26.92
26	9.53	34.80		25	9.50	34.80	26.90	25	6.18	34.20		25	6.18	34.20	26.92
52	8.95	34.74		50	8.95	34.74	26.94	50	5.38	34.09		50	5.38	34.09	26.93
78	9.33	34.86		75	9.30	34.84	26.96	75	5.94	34.27		75	5.94	34.27	27.01
103	9.69	35.05		100	9.65	35.04	27.06	100	5.40	34.38		100	5.40	34.38	27.15
154	7.55	34.79		150	7.75	34.81	27.18	150	5.14	34.60		150	5.14	34.60	27.36
206	5.09	34.52		200	5.15	34.53	27.30	200	5.32	34.77		200	5.32	34.77	27.48
309	4.90	34.71		300	4.90	34.69	27.46	300	4.21	34.83		300	4.21	34.83	27.65
414	5.25	34.885		400	5.25	34.86	27.56	383	4.08	34.87		400	4.05	34.87	27.70
621	4.72	34.96		600	4.75	34.96	27.69	577	3.79	34.90		600	3.80	34.90	27.75
829	4.23	34.95		800	4.30	34.95	27.73	772	3.69	34.90		800	3.65	34.90	27.76
1,042	3.73	34.86		1,000	3.80	34.87	27.73	968	3.53	34.89		1,000	3.50	34.89	27.77
1,580	3.44	34.89						1,466	3.27	34.87					
Station 5790; April 10; latitude 44°22' N., longitude 45°18' W.; depth 4,298 m.; dynamic height 971.062								Station 5794; April 11; latitude 45°21' N., longitude 46°42' W.; depth 3,109 m.; dynamic height 970.929.							
0	8.57	34.42		0	8.57	34.42	26.75	0	5.25	34.10		0	5.25	34.10	26.95
24	8.55	34.41		25	8.55	34.41	26.75	25	5.20	34.09		25	5.20	34.09	26.95
48	8.35	34.54		50	8.40	34.58	26.90	50	4.14	34.03		50	4.14	34.03	27.02
72	9.63	35.00		75	9.60	35.00	27.04	75	4.11	34.06		75	4.11	34.06	27.05
96	9.18	34.96		100	9.10	34.94	27.07	99	3.68	34.12		100	3.70	34.12	27.14
144	7.65	34.80		150	7.50	34.78	27.19	149	4.50	34.55		150	4.50	34.55	27.40
193	6.55	34.68		200	6.35	34.67	27.27	199	4.41	34.77		200	4.40	34.77	27.58
289	4.83	34.60		300	5.05	34.65	27.41	298	3.97	34.82		300	3.95	34.82	27.67
357	6.87	35.07		400	6.40	35.02	27.54	366	*3.75	34.84		400	3.70	34.84	27.71
544	4.69	34.88		600	4.60	34.90	27.66	552	3.58	34.86		600	3.55	34.87	27.75
738	4.56	34.96		800	4.50	34.96	27.72	741	3.51	34.88		800	3.50	34.88	27.76
930	4.25	34.96		1,000	4.15	34.96	27.76	934	3.42	34.88		1,000	3.40	34.88	27.77
1,423	3.72	34.92						1,430	3.28	34.88					
Station 5791; April 10; latitude 44°49' N., longitude 45°17' W.; depth 4,115 m.; dynamic height 971.013.								Station 5795; April 11; latitude 45°23.5' N., longitude 47°23' W.; depth 2,378 m.; dynamic height 970.893.							
0	8.10	34.50		0	8.10	34.50	26.89	0	2.63	34.00		0	2.63	34.00	27.14
25	8.12	34.50		25	8.12	34.50	26.89	24	2.61	34.00		25	2.60	34.00	27.14
50	8.08	34.50		50	8.08	34.50	26.89	47	2.55	34.00		50	2.55	34.00	27.15
75	7.87	34.46		75	7.87	34.46	26.89	71	2.63	34.08		75	2.50	34.13	27.23
99	7.70	34.70		100	7.70	34.70	27.10	94	3.78	34.40		100	4.00	34.45	27.37
149	5.52	34.51		150	5.45	34.51	27.26	141	4.64	34.74		150	4.60	34.75	27.54
199	4.59	34.44		200	4.60	34.44	27.29	189	4.40	34.78		200	4.35	34.79	27.60
298	4.93	34.72		300	4.90	34.72	27.49	283	4.16	34.86		300	4.15	34.87	27.69
394	4.44	34.82		400	4.40	34.82	27.62	354	4.09	34.88		400	4.00	34.88	27.71
595	4.23	34.91		600	4.20	34.91	27.71	537	3.72	34.89		600	3.60	34.89	27.76
800	4.05	34.925		800	4.05	34.92	27.74	723	3.45	34.88		800	3.40	34.88	27.77
1,005	3.77	34.92		1,000	3.80	34.92	27.77	915	3.34	34.88		1,000	3.35	34.88	27.77
1,526	3.36	34.88						1,413	3.26	34.88					
Station 5792; April 11; latitude 45°20' N., longitude 45°14' W.; depth 4,061 m.; dynamic height 970.957.								Station 5796; April 11; latitude 45°38' N., longitude 47°43' W.; depth 1,430 m.; dynamic height 970.916.							
0	5.49	34.18		0	5.49	34.18	26.99	0	1.09	33.70		0	1.09	33.70	27.01
25	5.48	34.18		25	5.48	34.18	26.99	25	1.26	33.76		25	1.26	33.76	27.05
51	5.48	34.18		50	5.48	34.18	26.99	50	2.04	33.97		50	2.04	33.97	27.17
76	5.15	34.18		75	5.15	34.18	27.03	74	0.74	33.88		75	0.75	33.88	27.18
102	4.38	34.19		100	4.45	34.19	27.11	99	1.37	33.98		100	1.35	33.99	27.25
153	5.28	34.57		150	5.25	34.56	27.32	148	2.75	34.39		150	2.80	34.40	27.44
204	5.17	34.72		200	5.20	34.71	27.44	197	3.36	34.61		200	3.35	34.62	27.57
306	4.86	34.89		300	4.90	34.89	27.62	296	3.79	34.83		300	3.80	34.83	27.69
417	4.25	34.88		400	4.35	34.88	27.67	360	3.63	34.83		400	3.60	34.83	27.71
617	4.21	34.96		600	4.20	34.96	27.76	542	3.52	34.85		600	3.50	34.85	27.74
813	3.86	34.92		800	3.90	34.92	27.76	726	3.45	34.86		800	3.40	34.85	27.75
1,018	3.61	34.91		1,000	3.60	34.91	27.78	919	3.35	34.845		1,000	3.35	34.85	27.75
1,534	3.42	34.91						1,300	3.26	34.84					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5797; April 11; latitude 45°45' N., longitude 48°07' W.; depth 608 m.; dynamic height 971.026.								Station 5803; April 12; latitude 46°12.5' N., longitude 48°43' W.; depth 95 m.; dynamic height 971.076.							
0	-0.80	33.12		0	-0.80	33.12	26.64	0	0.28	33.13		0	0.28	33.13	26.61
26	-0.80	33.12		25	-0.80	33.12	26.64	25	0.28	33.12		25	0.28	33.12	26.60
51	-0.72	33.40		50	-0.70	33.39	26.86	49	0.29	33.12		50	0.30	33.12	26.60
77	-0.55	33.60		75	-0.55	33.59	27.01	74	0.09	33.20		75	0.10	33.20	26.68
102	0.34	33.72		100	0.30	33.72	27.08								
153	0.43	33.80		150	0.45	33.79	27.12								
204	0.54	33.88		200	0.55	33.87	27.19								
306	2.14	34.41		300	2.00	34.38	27.49								
406	3.49	34.72		400	3.45	34.71	27.63								
592	3.57	34.82		600	3.60	34.82	27.71								
Station 5798; April 11; latitude 45°49.5' N., longitude 48°07' W.; depth 170 m.; dynamic height 971.063.								Station 5804; April 12; latitude 46°10.5' N., longitude 48°12' W.; depth 115 m.; dynamic height 971.067.							
0	-0.97	33.07		0	-0.97	33.07	26.61	0	-0.42	33.00		0	-0.42	33.00	26.54
25	-0.95	33.10		25	-0.95	33.10	26.63	25	-0.41	33.00		25	-0.41	33.00	26.54
50	-1.01	33.36		50	-1.01	33.36	26.84	51	-0.25	33.40		50	-0.25	33.40	26.85
75	-0.61	33.52		75	-0.61	33.52	26.96	76	-0.24	33.40		75	-0.25	33.40	26.85
100	0.02	33.62		100	0.02	33.62	27.02	102	-0.12	33.50		100	-0.15	33.49	26.92
150	0.05	33.62		150	0.05	33.62	27.02								
Station 5799; April 11; latitude 45°52' N., longitude 48°12' W.; depth 126 m.; dynamic height 971.074.								Station 5805; April 12; latitude 46°09.5' N., longitude 47°51' W.; depth 169 m.; dynamic height 971.075.							
0	-0.92	33.07		0	-0.92	33.07	26.61	0	-1.19	33.03		0	-1.19	33.03	26.58
25	-0.95	33.07		25	-0.95	33.07	26.61	24	-1.20	33.03		25	-1.20	33.03	26.58
50	-1.16	33.18		50	-1.16	33.18	26.70	49	-1.20	33.04		50	-1.20	33.04	26.59
74	-1.01	33.29		75	-1.00	33.29	26.78	73	-0.87	33.30		75	-0.85	33.31	26.79
99	-0.28	33.48		100	-0.25	33.49	26.92	97	-0.67	33.44		100	-0.60	33.44	26.89
								146	-0.10	33.58		150	-0.05	33.59	26.99
Station 5800; April 12; latitude 46°00' N., longitude 48°27' W.; depth 102 m.; dynamic height 971.078.								Station 5806; April 12; latitude 46°07.5' N., longitude 47°31' W.; depth 633 m.; dynamic height 971.024.							
0	-0.26	33.02		0	-0.26	33.02	26.54	0	-0.41	33.07		0	-0.41	33.07	26.59
25	-0.25	33.03		25	-0.25	33.03	26.55	24	-0.48	33.07		25	-0.45	33.07	26.59
50	-0.15	33.06		50	-0.15	33.06	26.57	48	-0.61	33.25		50	-0.65	33.26	26.75
75	-0.13	33.07		75	-0.13	33.07	26.58	72	-0.78	33.40		75	-0.80	33.41	26.88
95	*-0.36	33.46		(100)	-0.40	33.50	26.94	97	-0.56	33.50		100	-0.50	33.52	26.96
								145	0.46	34.87		150	0.50	33.89	27.20
								193	0.82	34.03		200	0.90	34.06	27.32
								290	2.27	34.44		300	2.35	34.46	27.53
								394	2.96	34.61		400	3.00	34.62	27.61
								600	3.66	34.85		600	3.66	34.85	27.72
Station 5801; April 12; latitude 46°07' N., longitude 48°41' W.; depth 95 m.; dynamic height 971.080.								Station 5807; April 12; latitude 46°06' N., longitude 47°14' W.; depth 1,472 m.; dynamic height 970.939.							
0	0.21	33.10		0	0.21	33.10	26.58	0	-0.28	33.25		0	-0.28	33.25	26.72
26	0.21	33.10		25	0.20	33.10	26.58	26	0.07	33.57		25	0.05	33.56	26.97
51	0.21	33.10		50	0.20	33.10	26.58	51	0.37	33.86		50	0.35	33.85	27.18
77	-0.03	33.22		75	0.00	33.21	26.69	77	0.92	34.03		75	0.90	34.01	27.28
								103	1.01	34.12		100	1.00	34.11	27.35
								153	1.67	34.27		150	1.60	34.26	27.43
								204	2.22	34.42		200	2.15	34.41	27.51
								307	3.45	34.71		300	3.40	34.69	27.62
								424	3.86	34.83		400	3.85	34.82	27.68
								637	3.63	34.84		600	3.65	34.84	27.71
								851	3.45	34.84		800	3.50	34.84	27.73
								1,063	3.35	34.86		1,000	3.35	34.86	27.76
								1,457	3.26	34.87					
0	0.34	33.06		0	0.34	33.06	26.54								
27	0.33	33.08		25	0.30	33.08	27.57								
54	0.28	33.09		50	0.30	33.09	26.57								
70	0.25	33.12		(75)	0.25	33.13	26.61								

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5808; April 12; latitude 46°05' N., longitude 46°35' W.; depth 1,097 m.; dynamic height 970.906.							Station 5812; April 13; latitude 46°25' N., longitude 44°50' W.; depth 1,518 m.; dynamic height 970.876.						
0	3.59	34.04	0	3.59	34.04	27.08	0	3.79	34.18	0	3.79	34.18	27.17
25	3.45	34.05	25	3.45	34.05	27.11	25	3.80	34.18	25	3.80	34.18	27.18
49	3.04	34.04	50	3.05	34.04	27.13	50	3.79	34.19	50	3.79	34.19	27.18
74	3.90	34.32	75	3.95	34.33	27.28	76	3.87	34.32	75	3.85	34.32	27.29
98	4.22	34.50	100	4.25	34.51	27.39	101	3.96	34.48	100	3.95	34.47	27.39
147	4.50	34.73	150	4.50	34.74	27.54	151	3.93	34.73	150	3.95	34.72	27.59
196	4.50	34.82	200	4.50	34.82	27.61	201	3.87	34.82	200	3.85	34.82	27.68
294	4.16	24.86	300	4.15	24.86	27.68	302	3.86	34.85	300	3.85	34.85	27.70
401	3.89	34.88	400	3.90	34.88	27.72	417	3.56	34.86	400	3.60	34.86	27.74
600	3.64	34.88	600	3.65	34.88	27.74	627	3.42	34.86	600	3.45	34.86	27.75
800	3.37	34.86	800	3.60	34.86	27.74	839	*3.38	34.87	800	3.40	34.87	27.77
999	3.33	34.865	1,000	3.60	34.86	27.74	1,052	3.35	34.875	1,000	3.35	34.87	27.77
							1,234	3.33	34.875				
Station 5809; April 12; latitude 46°04' N., longitude 45°59' W.; depth 1,646 m.; dynamic height 970.900.							Station 5813; April 13; latitude 46°28' N., longitude 44°52' W.; depth 741 m.; dynamic height 970.886.						
0	3.90	34.02	0	3.90	34.02	27.04	0	3.80	34.10	0	3.80	34.10	27.11
25	3.90	34.06	25	3.90	34.06	27.08	26	3.80	34.10	25	3.75	34.10	27.12
50	3.87	34.08	50	3.87	34.08	27.08	53	3.78	34.11	50	3.80	34.11	27.12
74	3.82	34.10	75	3.70	34.10	27.12	79	3.75	34.21	75	3.75	34.19	27.19
100	3.88	34.32	100	3.90	34.32	27.28	105	4.02	34.54	100	4.00	34.48	27.39
149	3.99	34.70	150	4.00	34.70	27.57	157	3.96	34.68	150	3.95	34.66	27.54
199	3.92	34.80	200	3.90	34.80	27.66	209	3.85	34.80	200	3.85	34.78	27.64
299	3.72	34.83	300	3.70	34.83	27.70	314	3.84	34.855	300	3.85	34.85	27.70
361	3.66	34.84	400	3.65	34.85	27.72	582	3.46	34.88	400	3.70	34.86	27.73
550	3.54	34.86	600	3.50	34.86	27.75				(600)	3.45	34.88	27.76
746	3.44	34.85	800	3.40	34.85	27.75							
941	3.35	34.865	1,000	3.35	34.86	27.76							
1,445	3.28	34.875											
Station 5810; April 13; latitude 46°04.5' N., longitude 45°14' W.; depth 2,926 m.; dynamic height 970.909.							Station 5814; April 13; latitude 46°36' N., longitude 44°55' W.; depth 238 m.; dynamic height 970.903.						
0	5.01	34.26	0	5.01	34.26	27.11	0	3.81	34.06	0	3.81	34.06	27.08
25	5.00	34.27	25	5.00	34.27	27.13	25	3.81	34.05	25	3.81	34.05	27.07
50	4.90	34.28	50	4.90	34.28	27.13	49	3.81	34.07	50	3.80	34.07	27.09
75	4.90	34.35	75	4.90	34.35	27.19	74	3.70	34.13	75	3.70	34.13	27.14
101	4.81	34.46	100	4.80	34.46	27.29	98	3.65	34.22	100	3.65	34.24	27.24
150	4.75	34.67	150	4.75	34.67	27.47	147	4.22	34.66	150	4.20	34.67	27.53
201	4.24	34.71	200	4.25	34.71	27.55	196	3.99	34.78	200	3.95	34.78	27.63
302	3.89	34.80	300	3.90	34.80	27.66							
378	3.81	34.84	400	3.80	34.85	27.71							
572	3.61	34.865	600	3.55	34.87	27.75							
768	3.47	34.87	800	3.40	34.87	27.77							
969	3.38	34.87	1,000	3.35	34.87	27.77							
1,485	3.28	34.90											
Station 5811; April 13; latitude 46°04.5' N., longitude 44°42' W.; depth 3,510 m.; dynamic height 970.927.							Station 5815; April 13; latitude 46°43' N., longitude 44°56' W.; depth 174 m.; dynamic height 970.901.						
0	5.08	34.30	0	5.08	34.30	27.13	0	3.84	34.08	0	3.84	34.08	27.09
24	5.05	34.30	25	5.05	34.30	27.14	27	3.84	34.08	25	3.85	34.08	27.09
49	5.01	34.28	50	4.85	34.28	27.14	53	3.76	34.10	50	3.75	34.09	27.11
73	4.50	34.25	75	4.50	34.25	27.16	80	3.63	34.20	75	3.65	34.18	27.19
98	4.46	34.33	100	4.45	34.34	27.23	107	3.74	34.33	100	3.70	34.29	27.27
145	4.40	34.47	150	4.35	34.48	27.35	161	4.07	34.68	150	4.00	34.61	27.50
194	4.02	34.56	200	4.00	34.57	27.47							
292	4.36	34.82	300	4.35	34.83	27.63							
396	4.20	34.89	400	4.20	34.89	27.70	0	3.84	34.08	0	3.84	34.08	27.10
589	3.94	34.92	600	3.85	34.92	27.76	25	3.84	34.09	25	3.84	34.09	27.11
778	3.64	34.90	800	3.60	34.90	27.77	50	3.84	34.09	50	3.84	34.09	27.10
975	3.50	34.90	1,000	3.50	34.90	27.78	75	3.81	34.11	75	3.81	34.11	27.12
1,472	3.33	34.88					100	3.82	34.41	100	3.82	34.41	27.36
							145	4.04	34.65	(150)	4.05	34.67	27.54
Station 5816; April 13; latitude 46°49' N., longitude 44°57' W.; depth 165 m.; dynamic height 970.897.													

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5817; April 13; latitude 46°49' N., longitude 45°04' W.; depth 176 m.; dynamic height 970.903.								Station 5822; April 15; latitude 46°46.5' N., longitude 46°51' W.; depth 1,229 m.; dynamic height 970.891.							
0-----	3.86	34.07		0-----	3.86	34.07	27.09	0-----	1.27	34.02		0-----	1.27	34.02	27.27
26-----	3.86	34.075		25-----	3.85	34.08	27.09	27-----	1.43	34.08		25-----	1.40	34.07	27.29
51-----	3.87	34.08		50-----	3.85	34.08	27.09	52-----	1.61	34.13		50-----	1.60	34.12	27.32
77-----	3.84	34.115		75-----	3.85	34.11	27.12	79-----	1.62	34.18		75-----	1.65	34.17	27.36
102-----	3.85	34.27		100-----	3.85	34.25	27.23	105-----	1.81	34.28		100-----	1.75	34.26	27.42
				(150)---	4.00	34.60	27.49	158-----	2.47	34.49		150-----	2.35	34.46	27.53
Station 5818; April 13; latitude 46°49' N., longitude 45°18' W.; depth 222 m.; dynamic height 970.899.								210-----	2.97	34.62		200-----	2.85	34.60	27.60
0-----	3.84	34.04		0-----	3.84	34.04	27.06	315-----	3.88	34.80		300-----	3.75	34.78	27.65
25-----	3.84	34.04		25-----	3.84	34.04	27.06	401-----	3.78	34.84		400-----	3.80	34.84	27.70
50-----	3.82	34.06		50-----	3.82	34.06	27.08	604-----	3.61	34.85		600-----	3.60	34.85	27.73
75-----	3.79	34.06		75-----	3.79	34.06	27.08	807-----	3.42	34.86		800-----	3.40	34.86	27.76
100-----	3.95	34.38		100-----	3.95	34.38	27.32	1,173---	3.31	34.86		1,000---	3.35	34.86	27.76
149-----	4.14	34.73		150-----	4.15	34.73	27.57	Station 5823; April 15; latitude 46°43' N., longitude 47°10' W.; depth 567 m.; dynamic height 971.001.							
199-----	4.04	34.72		200-----	4.05	34.72	27.58	0-----	-0.41	33.41		0-----	-0.41	33.41	26.87
Station 5819; April 14; latitude 46°56' N., longitude 46°04' W.; depth 306 m.; dynamic height 970.913.								25-----	-0.39	33.42		25-----	-0.39	33.41	26.87
0-----	3.84	34.06		0-----	3.84	34.06	27.08	50-----	-0.36	33.41		50-----	-0.36	33.42	26.87
26-----	3.85	34.06		25-----	3.85	34.06	27.08	75-----	-0.36	33.42		75-----	-0.36	33.42	26.87
50-----	3.87	34.06		50-----	3.87	34.06	27.08	99-----	0.02	33.62		100-----	0.05	33.63	27.02
76-----	3.85	34.06		75-----	3.85	34.06	27.08	149-----	0.69	34.01		150-----	0.80	34.01	27.28
101-----	3.86	34.05		100-----	3.85	34.06	27.08	199-----	1.17	34.17		200-----	1.20	34.17	27.39
152-----	4.62	34.63		150-----	4.60	34.61	27.46	298-----	2.31	34.47		300-----	2.30	34.47	27.55
202-----	4.21	34.73		200-----	4.25	34.74	27.57	407-----	3.12	34.65		400-----	3.10	34.64	27.61
261-----	3.85	34.83		(300)---	3.80	34.86	27.72	Station 5824; April 15; latitude 46°42' N., longitude 47°17' W.; depth 298 m.; dynamic height 971.047.							
Station 5820; April 14; latitude 46°55.5' N., longitude 46°10' W.; depth 302 m.; dynamic height 970.908.								0-----	-0.89	33.24		0-----	-0.89	33.24	26.75
0-----	3.86	34.07		0-----	3.86	34.07	27.09	27-----	-0.78	33.30		25-----	-0.80	33.29	26.77
25-----	3.89	34.06		25-----	3.89	34.06	27.07	53-----	-0.49	33.40		50-----	-0.55	33.39	26.85
49-----	3.89	34.06		50-----	3.90	34.06	27.07	80-----	-0.43	33.44		75-----	-0.45	33.43	26.88
73-----	3.91	34.07		75-----	3.90	34.07	27.08	106-----	-0.01	33.54		100-----	-0.10	33.51	26.93
97-----	3.90	34.07		100-----	3.90	34.07	27.08	160-----	0.46	33.77		150-----	0.40	33.72	27.08
147-----	4.52	34.67		150-----	4.50	34.68	27.49	213-----	0.68	34.01		200-----	0.60	33.96	27.25
196-----	4.19	34.80		200-----	4.15	34.80	27.63	293-----	1.23	34.19		(300)---	1.30	34.20	27.40
293-----	3.80	34.85		300-----	3.80	34.85	27.71	Station 5825; April 15; latitude 46°43' N., longitude 47°34' W.; depth 178 m.; dynamic height 971.098.							
Station 5821; April 14; latitude 46°49.5' N., longitude 46°32' W.; depth 626 m.; dynamic height 970.883.								0-----	-1.40	32.92		0-----	-1.40	32.92	26.50
0-----	2.54	34.06		0-----	2.54	34.06	27.20	25-----	-1.40	32.95		25-----	-1.40	32.95	26.52
27-----	2.44	34.07		25-----	2.45	34.07	27.21	50-----	-1.39	32.96		50-----	-1.39	32.96	26.53
53-----	2.42	34.07		50-----	2.40	34.07	27.22	75-----	-1.37	32.98		75-----	-1.37	32.98	26.55
80-----	2.39	34.10		75-----	2.40	34.09	27.23	100-----	-1.23	33.08		100-----	-1.23	33.08	26.62
107-----	2.42	34.30		100-----	2.40	34.25	27.36	150-----	-0.13	33.48		150-----	-0.13	33.48	26.91
161-----	3.78	34.74		150-----	3.55	34.65	27.57	Station 5826; April 15; latitude 46°43' N., longitude 48°08' W.; depth 117 m.; dynamic height 971.077.							
214-----	3.85	34.80		200-----	3.85	34.79	27.65	0-----	-0.01	33.05		0-----	-0.01	33.05	26.56
321-----	3.79	34.84		300-----	3.80	34.83	27.69	25-----	-0.03	33.08		25-----	-0.03	33.08	26.58
389-----	3.52	34.86		400-----	3.50	34.86	27.74	50-----	-0.03	33.08		50-----	-0.03	33.08	26.58
594-----	3.48	34.86		600-----	3.45	34.86	27.75	75-----	-0.05	33.08		75-----	-0.05	33.08	26.58
								100-----	-0.11	33.55		100-----	-0.11	33.55	26.96

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5827; April 15; latitude 46°46.5' N., longitude 48°41' W.; depth 93 m.; dynamic height 971.076.							Station 5833; April 26; latitude 47°40.5' N., longitude 49°53' W.; depth 115 m.; dynamic height 971.096.						
0	0.21	33.07	0	0.21	33.07	26.56	0	-0.63	32.94	0	-0.63	32.94	26.50
25	0.14	33.14	25	0.14	33.14	26.62	25	-0.56	32.96	25	-0.56	32.96	26.50
50	0.13	33.13	50	0.13	33.14	26.62	51	-0.72	32.98	50	-0.70	32.98	26.53
75	0.13	33.14	75	0.13	33.14	26.62	76	-0.61	33.21	75	-0.65	33.21	26.62
							102	-0.31	33.35	100	-0.30	33.34	26.80
Station 5828; April 26; latitude 47°25.5' N., longitude 50°02' W.; depth 75 m.							Station 5834; April 26-27; latitude 47°57' N., longitude 49°45' W.; depth 178 m.; dynamic height 971.107.						
0	-0.60	33.03	0	-0.60	33.03		0	-1.03	32.91	0	-1.03	32.91	26.48
27	-0.61		25	-0.60			25	-1.12	32.92	25	-1.12	32.92	26.49
53	-0.45		50	-0.45			50	-1.28	32.93	50	-1.28	32.93	26.50
69	-0.49		(75)	-0.50			75	-1.36	33.01	75	-1.36	33.01	26.58
							101	-1.24	33.08	100	-1.25	33.08	26.62
							151	-0.71	33.31	150	-0.70	33.31	26.79
Station 5829; April 26; latitude 47°40' N., longitude 49°56' W.; depth 128 m.							Station 5835; April 27; latitude 48°10' N., longitude 49°40' W.; depth 224 m.; dynamic height 971.109.						
0	-0.59		0	-0.59			0	-1.05	32.85	0	-1.05	32.85	26.44
25	-0.62		25	-0.62			25	-1.16	32.86	25	-1.16	32.86	26.44
50	-0.64		50	-0.64			49	-1.48	32.93	50	-1.50	32.93	26.51
76	-0.74		75	-0.75			74	-1.41	33.02	75	-1.40	33.02	26.58
101	-0.32		100	-0.35			99	-1.55	33.07	100	-1.55	33.07	26.63
							148	-1.09	33.22	150	-1.05	33.23	26.74
							197	-0.39	33.43	200	-0.35	33.44	26.88
Station 5830; April 26; latitude 47°55' N., longitude 49°52' W.; depth 169 m.							Station 5836; April 27; latitude 48°30.5' N., longitude 49°30' W.; depth 564 m.; dynamic height 971.044.						
0	-1.18	32.88	0	-1.18	32.88	26.47	0	-1.06	32.98	0	-1.06	32.98	26.54
26	-1.23		25	-1.20	32.89	26.47	22	-1.00	33.05	25	-1.05	33.07	26.61
51	-1.35		50	-1.35	32.90	26.48	45	-1.18	33.15	50	-1.15	33.17	26.70
77	-1.39	32.99	75	-1.40	32.99	26.56	67	-0.83	33.23	75	-0.70	33.26	26.75
103	-1.21	33.10	100	-1.25	33.09	26.63	89	-0.55	33.33	100	-0.45	33.39	26.85
154	-0.31	33.43	150	-0.40	33.41	26.87	134	-0.10	33.61	150	0.10	33.72	27.09
							179	0.41	33.89	200	0.60	33.95	27.24
Station 5831; April 26; latitude 48°10.5' N., longitude 49°46' W.; depth 210 m.							Station 5837; April 27; latitude 48°37' N., longitude 49°27' W.; depth 1,060 m.; dynamic height 970.952.						
0	-1.09	32.87	0	-1.09	32.87	26.45	0	0.05	33.43	0	0.05	33.43	26.86
25	-1.15	32.88	25	-1.15	32.88	26.47	25	0.05	33.48	25	0.05	33.48	26.90
50	-1.36	32.91	50	-1.36	32.91	26.49	50	-0.19	33.59	50	-0.19	33.59	27.00
75	-1.57	33.01	75	-1.57	33.01	26.58	74	0.22	33.70	75	0.25	33.70	27.07
100	-1.53	33.09	100	-1.53	33.09	26.64	99	0.44	33.87	100	0.45	33.87	27.19
151	-0.83	33.28	150	-0.85	33.28	26.77	148	1.44	34.19	150	1.45	34.19	27.38
201	-0.38	33.41	200	-0.40	33.41	26.87	198	1.97	34.31	200	2.00	34.31	27.44
							297	2.71	34.62	300	2.75	34.62	27.63
Station 5832; April 26; latitude 47°23.5' N., longitude 50°00' W.; depth 114 m.; dynamic height 971.093.							Station 5837; April 27; latitude 48°37' N., longitude 49°27' W.; depth 1,060 m.; dynamic height 970.952.						
0	-0.18	33.05	0	-0.18	33.05	26.56	0	0.05	33.43	0	0.05	33.43	26.86
25	-0.29	33.06	25	-0.29	33.06	26.57	25	0.05	33.48	25	0.05	33.48	26.90
51	-0.37	33.09	50	-0.35	33.09	26.59	50	-0.19	33.59	50	-0.19	33.59	27.00
76	-0.44	33.12	75	-0.40	33.12	26.63	74	0.22	33.70	75	0.25	33.70	27.07
							99	0.44	33.87	100	0.45	33.87	27.19
							148	1.44	34.19	150	1.45	34.19	27.38
							198	1.97	34.31	200	2.00	34.31	27.44
							297	2.71	34.62	300	2.75	34.62	27.63
							344	2.93	34.67	400	3.25	34.73	27.66
							528	3.70	34.84	600	3.70	34.86	27.73
							720	3.66	34.87	800	3.60	34.88	27.75
							922	3.53	34.88	(1,000)	3.50	34.85	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5838; April 27; latitude 49°01.5' N., longitude 49°18' W.; depth 1,646 m.; dynamic height 970.906.								Station 5842; April 28; latitude 49°38' N., longitude 47°43' W.; depth 2,652 m.; dynamic height 970.848.							
0	0.15	33.47		0	0.15	33.47	26.89	0	3.87	34.40		0	3.87	34.40	27.35
24	1.00	33.93		25	1.00	33.93	27.20	26	3.85	34.40		25	3.85	34.40	27.35
47	0.95	33.98		50	0.95	33.99	27.25	51	3.22	34.39		50	3.25	34.39	27.39
71	1.45	34.19		75	1.50	34.22	27.41	77	2.97	34.41		75	3.00	34.41	27.44
95	1.73	34.31		100	1.80	34.32	27.47	102	2.65	34.55		100	2.65	34.54	27.57
142	2.02	34.43		150	2.10	34.45	27.54	153	3.39	34.72		150	3.40	34.71	27.64
189	2.47	34.55		200	2.50	34.56	27.60	205	3.35	34.77		200	3.35	34.76	27.68
284	2.89	34.66		300	3.00	34.68	27.65	307	3.72	34.85		300	3.70	34.85	27.72
367	3.31	34.75		400	3.35	34.77	27.69	402	3.73	34.87		400	3.75	34.87	27.73
556	3.50	34.83		600	3.45	34.82	27.72	600	3.59	34.89		600	3.60	34.89	27.76
749	3.30	34.81		800	3.35	34.82	27.73	797	3.45	34.885		800	3.45	34.885	27.77
943	3.60	34.88		1,000	3.60	34.88	27.75	997	3.36	34.88		1,000	3.35	34.88	27.77
1,439	3.36	34.88						1,500	3.27	34.905					
Station 5839; April 27; latitude 49°27.5' N., longitude 49°01' W.; depth 1,829 m.; dynamic height 970.829.								Station 5843; April 28; latitude 49°15.5' N., longitude 47°53' W.; depth 2,451 m.; dynamic height 970.852.							
0	3.00	34.34		0	3.00	34.34	27.38	0	4.56	34.47		0	4.56	34.47	27.33
24	2.47	34.32		25	2.45	34.32	27.41	25	4.50	34.45		25	4.50	34.45	27.32
49	2.54	34.34		50	2.55	34.34	27.42	50	4.48	34.49		50	4.48	34.49	27.35
73	2.69	34.49		75	2.70	34.51	27.54	75	3.87	34.47		75	3.87	34.47	27.40
98	2.77	34.69		100	2.80	34.70	27.68	100	2.91	34.56		100	2.91	34.56	27.57
147	3.19	34.77		150	3.20	34.77	27.71	150	3.21	34.73		150	3.21	34.73	27.67
195	3.40	34.80		200	3.40	34.81	27.72	201	3.14	34.75		200	3.15	34.75	27.69
293	3.52	34.84		300	3.55	34.84	27.72	301	3.15	34.78		300	3.15	34.78	27.71
407	3.53	34.86		400	3.55	34.86	27.74	378	3.71	34.87		400	3.70	34.87	27.74
609	3.57	34.89		600	3.60	34.89	27.76	566	3.61	34.88		600	3.60	34.88	27.75
810	3.47	34.89		800	3.45	34.89	27.77	755	3.48	34.88		800	3.45	34.88	27.76
1,014	3.41	34.89		1,000	3.40	34.89	27.78	950	3.38	34.87		1,000	3.35	34.87	27.77
1,529	3.19	34.92						1,447	3.30	34.91					
Station 5840; April 27; latitude 49°54' N., longitude 48°55' W.; depth 1,975 m.; dynamic height 970.839.								Station 5844; April 28; latitude 48°49' N., longitude 48°07' W.; depth 2,268 m.; dynamic height 970.860.							
0	3.81	34.53		0	3.81	34.53	27.45	0	2.65	34.28		0	2.65	34.28	27.36
25	3.56	34.51		25	3.56	34.51	27.46	25	2.47	34.31		25	2.47	34.31	27.40
50	2.91	34.46		50	2.91	34.46	27.49	50	2.45	34.29		50	2.45	34.31	27.40
75	2.79	34.50		75	2.79	34.50	27.52	75	2.46	34.32		75	2.46	34.32	27.41
100	2.95	34.65		100	2.95	34.65	27.63	100	2.72	34.44		100	2.72	34.44	27.48
150	3.29	34.75		150	3.29	34.75	27.68	150	3.21	34.71		150	3.21	34.71	27.66
199	3.13	34.75		200	3.15	34.75	27.69	201	3.46	34.77		200	3.45	34.77	27.68
299	3.27	34.77		300	3.25	34.77	27.70	301	3.39	34.79		300	3.35	34.79	27.70
406	3.42	34.83		400	3.40	34.83	27.73	490	3.22	34.78		400	3.25	34.78	27.70
612	3.52	34.87		600	3.50	34.87	27.76	600	3.63	34.86		600	3.65	34.86	27.73
820	3.51	34.88		800	3.50	34.88	27.76	801	3.49	34.89		800	3.50	34.89	27.77
1,026	3.39	34.88		1,000	3.40	34.88	27.77	1,001	3.37	34.875		1,000	3.35	34.75	27.77
1,540	3.29	34.91						1,504	3.33	34.89					
Station 5841; April 28; latitude 49°45.5' N., longitude 48°22' W.; depth 2,378 m.; dynamic height 970.859.								Station 5845; April 28; latitude 48°28' N., longitude 48°20' W.; depth 1,829 m.; dynamic height 970.852.							
0	4.60	34.49		0	4.60	34.49	27.33	0	2.59	34.25		0	2.59	34.25	27.34
25	4.56	34.49		25	4.56	34.49	27.34	25	2.65	34.35		25	2.65	34.35	27.42
50	4.25	34.45		50	4.25	34.45	27.34	50	2.76	34.37		50	2.76	34.37	27.43
75	3.54	34.44		75	3.54	34.44	27.40	75	2.61	34.45		75	2.61	34.45	27.50
100	3.25	34.51		100	3.25	34.51	27.49	100	2.69	34.59		100	2.69	34.59	27.60
150	2.89	34.63		150	2.89	34.63	27.62	150	3.04	34.69		150	3.04	34.69	27.65
201	3.53	34.77		200	3.50	34.77	27.68	200	3.32	34.75		200	3.32	34.75	27.68
301	3.49	34.81		300	3.50	34.81	27.71	300	3.70	34.83		300	3.70	34.83	27.70
408	3.45	34.83		400	3.45	34.83	27.72	384	3.65	34.85		400	3.65	34.85	27.72
609	3.62	34.88		600	3.60	34.88	27.75	578	3.63	34.88		600	3.65	34.88	27.74
807	3.49	34.885		800	3.50	34.88	27.76	774	3.53	34.88		800	3.55	34.88	27.75
1,011	3.39	34.88		1,000	3.40	34.88	27.77	970	3.43	34.88		1,000	3.40	34.88	27.77
1,526	3.33	34.90						1,464	3.32	34.90					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5846; April 29; latitude 48°07' N., longitude 48°30' W.; depth 503 m.; dynamic height 970.958.								Station 5851; April 29; latitude 47°43' N., longitude 48°12' W.; depth 240 m.; dynamic height 971.071.							
0	-0.15	33.31		0	-0.15	33.31	26.77	0	-0.59	32.83		0	-0.59	32.83	26.40
25	-0.64	33.35		25	-0.64	33.35	26.82	25	-0.91	32.87		25	-0.91	32.87	26.45
51	-0.35	33.52		50	-0.35	33.52	26.95	50	-1.07	32.89		50	-1.07	32.87	26.46
77	0.18	33.74		75	0.15	33.72	27.09	75	-1.24	33.03		75	-1.24	33.03	26.58
103	0.52	33.90		100	0.50	33.89	27.20	100	-1.16	33.17		100	-1.16	33.17	26.70
153	1.15	34.13		150	1.15	34.12	27.35	149	-0.39	33.43		150	-0.40	33.44	26.89
205	1.86	34.31		200	1.80	34.29	27.44	199	0.40	33.79		200	0.40	33.80	27.14
308	3.01	34.65		300	2.90	34.63	27.62	229	1.21	34.12					
407	3.79	34.85		400	3.75	34.84	27.70								
480	3.63	34.855													
Station 5847; April 29; latitude 48°03' N., longitude 48°33' W.; depth 324 m.; dynamic height 970.969.								Station 5852; April 29; latitude 47°50' N., longitude 47°50' W.; depth 315 m.; dynamic height 971.015.							
0	-0.34	33.27		0	-0.34	33.27	26.74	0	-0.14	32.97		0	-0.14	32.97	26.50
25	0.27	33.50		25	0.27	33.50	26.91	25	-0.71	33.10		25	-0.71	33.10	26.62
51	0.14	33.56		50	0.15	33.56	26.96	50	-0.72	33.28		50	-0.72	33.28	26.77
76	0.32	33.69		75	0.30	33.68	27.04	74	-0.57	33.40		75	-0.55	33.40	26.86
102	0.53	33.91		100	0.50	33.88	27.19	99	-0.15	33.55		100	-0.15	33.55	26.97
153	0.96	34.05		150	0.95	34.04	27.29	149	0.47	33.83		150	0.45	33.83	27.15
203	1.49	34.26		200	1.45	34.25	27.43	198	0.80	34.02		200	0.80	34.03	27.29
303	2.68	34.56		300	2.65	34.55	27.58	297	3.01	35.65		300	3.05	34.67	27.64
Station 5848; April 29; latitude 47°47.5' N., longitude 48°41' W.; depth 224 m.; dynamic height 971.067.								Station 5853; April 29; latitude 47°57' N., longitude 47°42' W.; depth 355 m.; dynamic height 971.019.							
0	-0.57	32.87		0	-0.57	32.87	26.44	0	-0.43	33.01		0	-0.43	33.01	26.55
25	-1.13	32.91		25	-1.13	32.91	26.48	25	-0.90	33.14		25	-0.90	33.14	26.67
51	-1.35	32.94		50	-1.35	32.94	26.52	50	-0.82	33.27		50	-0.82	33.27	26.76
76	-1.42	33.04		75	-1.40	33.04	26.60	75	-0.43	33.42		75	-0.43	33.42	26.88
102	-1.05	33.19		100	-1.10	33.18	26.70	101	-0.14	33.56		100	-0.15	33.56	26.98
153	-0.64	33.38		150	-0.65	33.37	26.84	151	0.38	33.82		150	0.35	33.82	27.16
204	-0.16	33.56		200	-0.20	33.54	26.96	201	0.94	34.02		200	0.95	34.02	27.28
								302	2.24	34.44		300	2.20	34.13	27.52
Station 5849; April 29; latitude 47°35' N., longitude 48°45' W.; depth 172 m.; dynamic height 971.073.								Station 5854; April 29; latitude 48°08.5' N., longitude 47°27' W.; depth 1,097 m.; dynamic height 970.917.							
0	-0.66	32.88		0	-0.66	32.88	26.45	0	0.89	33.37		0	0.89	33.37	26.76
25	-1.22	32.95		25	-1.22	32.95	26.52	25	0.88	33.99		25	0.88	33.99	27.26
51	-1.28	33.01		50	-1.30	33.01	26.57	50	0.93	34.06		50	0.93	34.06	27.31
76	-1.29	33.09		75	-1.30	33.09	26.63	75	1.22	34.15		75	1.22	34.15	27.37
102	-1.08	33.19		100	-1.15	33.18	26.70	101	1.40	34.21		100	1.40	34.21	27.41
153	-0.67	33.34		150	-0.70	33.33	26.81	151	1.75	34.31		150	1.70	34.31	27.46
								201	2.39	34.48		200	2.40	34.48	27.54
Station 5850; April 29; latitude 47°41' N., longitude 48°20' W.; depth 220 m.; dynamic height 971.078.								302	3.00	34.65		300	3.00	34.65	27.63
0	-0.71	32.83		0	-0.71	32.83	26.41	388	3.27	34.71		400	3.30	34.72	27.66
24	-1.10	32.91		25	-1.15	32.91	26.48	584	3.72	34.84		600	3.70	34.85	27.72
49	-1.37	32.92		50	-1.35	32.92	26.50	781	3.68	34.87		800	3.65	34.87	27.74
73	-1.30	33.09		75	-1.30	33.10	26.64	981	3.54	34.88		1000	3.55	34.88	27.75
98	-1.18	33.13		100	-1.15	33.13	26.66								
146	-0.71	33.31		150	-0.65	33.33	26.81								
195	-0.04	33.60		200	0.00	33.63	27.02								
Station 5855; April 29; latitude 48°28.5' N., longitude 47°09' W.; depth 2,195 m.; dynamic height 970.856.								Station 5855; April 29; latitude 48°28.5' N., longitude 47°09' W.; depth 2,195 m.; dynamic height 970.856.							
0	2.48	34.21		0	2.48	34.21	27.32	0	2.48	34.21		0	2.48	34.21	27.32
25	2.21	34.24		25	2.21	34.24	27.37	25	2.21	34.24		25	2.21	34.24	27.37
49	2.38	34.32		50	2.40	34.32	27.42	49	2.38	34.32		50	2.40	34.32	27.42
74	3.44	34.36		75	2.45	34.36	27.44	74	3.44	34.36		75	2.45	34.36	27.44
99	2.51	34.39		100	2.50	34.39	27.46	99	2.51	34.39		100	2.50	34.39	27.46
148	3.19	34.68		150	3.20	34.69	27.64	148	3.19	34.68		150	3.20	34.69	27.64
197	3.64	34.79		200	3.65	34.79	27.67	197	3.64	34.79		200	3.65	34.79	27.67
296	3.82	34.855		300	3.80	34.85	27.71	296	3.82	34.855		300	3.80	34.85	27.71
380	3.63	34.85		400	3.65	34.85	27.72	380	3.63	34.85		400	3.65	34.85	27.72
572	3.63	34.88		600	3.60	34.88	27.75	572	3.63	34.88		600	3.60	34.88	27.75
765	3.50	34.875		800	3.50	34.88	27.76	765	3.50	34.875		800	3.50	34.88	27.76
960	3.41	34.88		1,000	3.40	34.89	27.78	960	3.41	34.88		1,000	3.40	34.89	27.78
1,456	3.31	34.90						1,456	3.31	34.90					

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values			σ_t	Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	
Station 5856; April 29; latitude 48°49.5' N., longitude 46°50' W.; depth 2,652 m.; dynamic height 970.874.							Station 5860; April 30; latitude 48°40.5' N., longitude 45°32' W.; depth 1,186 m.; dynamic height 970.858.						
0	4.24	34.405	0	4.24	34.405	27.30	0	4.39	34.28	0	4.39	34.28	27.19
24	4.22	34.40	25	4.20	34.40	27.31	26	3.73	34.28	25	3.70	34.28	27.26
48	4.12	34.41	50	4.10	34.41	27.33	52	3.68	34.33	50	3.70	34.32	27.30
72	4.03	34.41	75	4.00	34.41	27.34	78	3.35	34.39	75	3.40	34.38	27.37
96	3.93	34.41	100	3.90	34.41	27.35	104	2.89	34.49	100	2.90	34.47	27.50
144	3.28	34.59	150	3.30	34.61	27.57	155	3.65	34.75	150	3.60	34.73	27.63
191	3.70	34.75	200	3.75	34.76	27.64	207	3.84	34.81	200	3.85	34.81	27.67
287	3.91	34.84	300	3.90	34.85	27.70	311	3.79	34.86	300	3.80	34.86	27.72
362	3.83	34.86	400	3.75	34.87	27.73	404	3.71	34.87	200	3.70	34.87	27.74
550	3.65	34.885	600	3.60	34.88	27.75	607	3.52	34.885	600	3.50	34.88	27.76
743	3.54	34.88	800	3.50	34.88	27.76	812	3.36	34.875	800	3.40	34.875	27.77
936	3.45	34.87	1,000	3.40	34.87	27.77	1,021	3.29	34.86	1,000	3.30	34.86	27.77
1,431	3.31	34.875											
Station 5857; April 30; latitude 49°15' N., longitude 46°26' W.; depth 3,017 m.; dynamic height 970.864.							Station 5861; April 30; latitude 48°22.5' N., longitude 40°06' W.; depth 1,130 m.; dynamic height 970.856.						
0	4.09	34.36	0	4.09	34.36	27.29	0	2.46	34.02	0	2.46	34.02	27.17
26	3.65	34.36	25	3.65	34.36	27.33	25	1.47	34.01	25	1.47	34.01	27.24
51	3.46	34.37	50	3.45	34.37	27.36	49	1.47	34.13	50	1.45	34.13	27.33
77	3.35	34.37	75	3.35	34.37	27.37	74	2.08	34.45	75	2.10	34.45	27.54
102	3.47	24.51	100	3.45	34.49	27.45	99	2.45	34.54	100	2.45	34.54	27.58
152	3.77	34.74	150	3.75	34.73	27.61	148	2.96	34.66	150	2.95	34.66	27.64
203	4.02	34.83	200	4.00	34.83	27.67	197	3.32	34.73	200	3.35	34.73	27.65
305	3.82	34.86	300	3.85	34.86	27.71	296	3.84	34.86	300	3.85	34.86	27.71
409	3.71	34.87	400	3.70	34.87	27.74	405	3.75	34.86	400	3.75	34.86	27.72
610	3.55	34.88	600	3.55	34.88	27.75	607	3.59	34.88	600	3.60	34.88	27.75
810	3.44	34.87	800	3.45	34.87	27.76	808	3.44	34.885	800	3.45	34.885	27.77
1,014	3.33	34.87	1,000	3.30	34.87	27.78	1,015	3.35	34.88	1,000	3.35	34.88	27.77
1,532	3.30	34.89											
Station 5858; April 30; latitude 49°07' N., longitude 45°44' W.; depth 2,743 m.; dynamic height 970.865.							Station 5862; April 30; latitude 48°03' N., longitude 46°28' W.; depth 1,181 m.; dynamic height 970.873.						
0	2.45	34.15	0	2.45	34.15	27.27	0	2.42	34.05	0	2.42	34.05	27.20
25	3.79	34.35	26	3.79	34.35	27.32	25	1.78	34.07	25	1.78	34.07	27.27
50	3.56	34.37	50	3.56	34.37	27.35	49	2.93	34.23	50	2.95	34.23	27.29
75	3.39	34.39	75	3.39	34.39	27.38	74	3.10	34.31	75	3.10	34.31	27.35
99	2.39	34.36	100	2.40	34.36	27.45	98	2.22	34.31	100	2.25	34.31	27.42
149	3.67	34.73	150	3.65	34.73	27.62	147	2.89	34.62	150	2.90	34.63	27.62
199	3.27	34.73	200	3.30	34.73	27.66	197	3.38	34.73	200	3.40	34.73	27.65
298	3.72	34.83	300	3.70	34.83	27.70	295	3.81	34.85	300	3.80	34.85	27.71
402	3.69	34.85	400	3.70	34.85	27.72	360	3.73	34.855	400	3.70	34.855	27.72
601	3.59	34.88	600	3.60	34.88	27.75	549	3.56	34.855	600	3.55	34.86	27.74
799	3.45	34.88	800	3.45	34.88	27.76	745	3.46	34.87	800	3.45	34.87	27.76
1,001	3.38	34.88	1,000	3.35	34.88	27.77	949	3.34	34.87	1,000	3.30	34.87	27.78
1,511	3.33	34.89											
Station 5859; April 30; latitude 48°56' N., longitude 45°05' W.; depth 1,417 m.; dynamic height 970.859.							Station 5863; May 1; latitude 47°54.5' N., longitude 46°10' W.; depth 1,060 m.; dynamic height 970.849.						
0	2.30	34.03	0	2.30	34.03	27.19	0	3.45	34.20	0	3.45	34.20	27.22
24	1.94	34.13	25	1.90	34.13	27.30	25	2.76	34.29	25	2.76	34.29	27.36
49	1.92	34.19	50	1.90	34.19	27.35	50	2.46	34.28	50	2.46	34.28	27.37
73	2.54	34.40	75	2.55	34.41	27.48	75	2.74	34.33	75	2.74	34.33	27.39
97	2.74	34.53	100	2.75	34.55	27.57	100	2.93	34.43	100	2.93	34.43	27.45
146	3.15	34.71	150	3.15	34.72	27.67	149	3.79	34.76	150	3.80	34.76	27.64
195	3.45	34.77	200	3.45	34.77	27.68	199	3.74	34.83	200	3.75	34.83	27.69
292	3.66	34.82	300	3.70	34.82	27.70	299	3.61	34.84	300	3.65	34.84	27.71
321	3.82	34.86	400	3.75	34.87	27.73	406	3.52	34.85	400	3.50	34.85	27.74
508	3.64	34.87	600	3.55	34.87	27.75	609	3.42	34.87	600	3.40	34.87	27.77
697	3.47	34.88	800	3.45	34.88	27.76	814	3.25	34.865	800	3.25	34.865	27.77
890	3.39	34.88	1,000	3.40	34.88	27.77	1,028	3.23	34.875	1,000	3.20	34.87	27.79
1,335	3.30	34.89											

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5864; May 1; latitude 47°45.5' N., longitude 45°52' W.; depth 434 m.; dynamic height 970.875.								Station 5869; May 2; latitude 47°18' N., longitude 45°40' W.; depth 274 m.; dynamic height 970.899							
0-----	3.73	34.05		0-----	3.73	34.05	27.08	0-----	3.86	34.09		0-----	3.86	34.09	27.10
25-----	3.71	34.07		25-----	3.71	34.07	27.10	24-----	3.86	34.09		25-----	3.85	34.09	27.10
49-----	3.30	34.14		50-----	3.30	34.14	27.19	47-----	3.86	34.09		50-----	3.85	34.09	27.10
74-----	3.02	34.23		75-----	3.00	34.23	27.29	71-----	3.87	34.08		75-----	3.85	34.09	27.10
99-----	2.99	34.33		100-----	3.00	34.33	27.37	94-----	3.85	34.10		100-----	3.85	34.16	27.16
147-----	3.46	34.60		150-----	3.50	34.62	27.56	142-----	4.27	34.59		150-----	4.25	34.65	27.50
196-----	3.82	34.795		200-----	3.80	34.80	27.67	189-----	4.10	34.78		200-----	4.05	34.79	27.63
295-----	3.69	34.84		300-----	3.70	34.84	27.71	236-----	3.89	34.83					
402-----	3.39	34.86		400-----	3.40	34.86	27.76								
Station 5865; May 1; latitude 47°42.5' N., longitude 45°43' W.; depth 320 m.; dynamic height 970.879.								Station 5870; May 2; latitude 47°16' N., longitude 45°56' W.; depth 318 m.; dynamic height 970.908.							
0-----	4.18	34.02		0-----	4.18	34.02	27.01	0-----	3.86	34.06		0-----	3.86	34.06	27.08
22-----	4.17	34.02		25-----	4.10	34.02	27.02	24-----	3.86	34.06		25-----	3.85	34.06	27.08
45-----	3.43	34.09		50-----	3.25	34.10	27.16	47-----	3.85	34.07		50-----	3.85	34.07	27.09
67-----	3.06	34.15		75-----	3.10	34.19	27.25	71-----	3.84	34.08		75-----	3.85	34.08	27.09
89-----	3.30	34.30		100-----	3.50	34.38	27.36	95-----	3.81	34.09		100-----	3.80	34.09	27.10
134-----	4.23	34.62		150-----	4.25	34.71	27.55	142-----	4.12	34.50		150-----	4.15	34.56	27.44
178-----	4.18	34.81		200-----	4.10	34.83	27.66	189-----	4.26	34.75		200-----	4.20	34.77	27.61
267-----	3.79	34.86		(300)---	3.65	34.87	27.74	284-----	3.88	34.86		(300)---	3.85	34.86	27.71
Station 5866; May 1; latitude 47°29.5' N., longitude 45°12' W.; depth 224 m.; dynamic height 970.888.								Station 5871; May 2; latitude 47°15.5' N., longitude 46°30' W.; depth 631 m.; dynamic height 970.877.							
0-----	4.21	34.03		0-----	4.21	34.03	27.02	0-----	2.51	34.16		0-----	2.51	34.16	27.28
25-----	4.17	34.05		25-----	4.17	34.05	27.04	26-----	2.51	34.16		25-----	2.50	34.16	27.28
50-----	3.81	34.12		50-----	3.81	34.12	27.13	51-----	2.51	34.16		50-----	2.50	34.16	27.28
75-----	3.63	34.17		75-----	3.63	34.17	27.19	77-----	2.51	34.16		75-----	2.50	34.16	27.28
100-----	3.48	34.29		100-----	3.48	34.29	27.29	103-----	2.77	34.24		100-----	2.70	34.22	27.31
150-----	4.13	34.66		150-----	4.13	34.66	27.53	153-----	3.75	34.71		150-----	3.70	34.68	27.58
200-----	3.99	34.77		200-----	3.99	34.77	27.63	205-----	3.94	34.81		200-----	3.90	34.81	27.67
								308-----	3.69	34.82		300-----	3.75	34.82	27.69
								378-----	3.55	34.83		400-----	3.50	34.83	27.72
								578-----	3.41	34.84		600-----	3.40	34.84	27.74
Station 5867; May 1; latitude 47°23.5' N., longitude 44°58' W.; depth 173 m.; dynamic height 970.890.								Station 5872; May 2; latitude 47°15.5' N., longitude 46°37' W.; depth 1,134 m.; dynamic height 970.877.							
0-----	4.30	34.05		0-----	4.30	34.05	27.02	0-----	2.15	34.17		0-----	2.15	34.17	27.32
26-----	4.28	34.04		25-----	4.25	34.04	27.02	26-----	2.15	34.16		25-----	2.10	34.16	27.31
52-----	3.86	34.07		50-----	3.85	34.06	27.08	52-----	2.15	34.16		50-----	2.15	34.16	27.31
77-----	3.84	34.10		75-----	3.85	34.10	27.11	78-----	2.13	34.17		75-----	2.15	34.17	27.32
103-----	4.07	34.51		100-----	4.05	34.44	27.36	104-----	2.21	34.21		100-----	2.20	34.20	27.34
154-----	4.01	34.71		150-----	4.05	34.69	27.55	155-----	2.66	34.55		150-----	2.60	34.51	27.55
Station 5868; May 2; latitude 47°19' N., longitude 45°24' W.; depth 231 m.; dynamic height 970.905.								207-----	3.67	34.75		200-----	3.50	34.73	27.64
0-----	3.83	34.09		0-----	3.83	34.09	27.10	311-----	3.80	34.84		300-----	3.80	34.84	27.70
26-----	3.83	34.08		25-----	3.85	34.08	27.09	422-----	3.67	34.84		400-----	3.70	34.84	27.71
52-----	3.84	34.10		50-----	3.85	34.10	27.11	629-----	3.42	34.85		600-----	3.45	34.85	27.74
79-----	3.84	34.10		75-----	3.85	34.10	27.11	835-----	3.37	34.86		800-----	3.40	34.86	27.76
105-----	3.86	34.12		100-----	3.85	34.11	27.12	1,047---	3.28	34.86		1,000---	3.30	34.86	27.77
157-----	4.06	34.63		150-----	4.05	34.58	27.46								
209-----	3.93	34.65		200-----	4.00	34.65	27.53								
Station 5873; May 2; latitude 47°15.5' N., longitude 47°07' W.; depth 982 m.; dynamic height 970.917.								Station 5873; May 2; latitude 47°15.5' N., longitude 47°07' W.; depth 982 m.; dynamic height 970.917.							
0-----	0.73	33.78		0-----	0.73	33.78	27.10	0-----	0.73	33.78		0-----	0.73	33.78	27.10
26-----	0.74	33.77		25-----	0.70	33.77	27.10	26-----	0.70	33.77		25-----	0.70	33.77	27.10
52-----	0.74	33.77		50-----	0.75	33.77	27.10	52-----	0.75	33.77		50-----	0.75	33.77	27.10
78-----	0.88	33.89		75-----	0.85	33.87	27.17	78-----	0.85	33.87		75-----	0.85	33.87	27.17
104-----	1.19	34.16		100-----	1.15	34.12	27.35	104-----	1.19	34.16		100-----	1.15	34.12	27.35
155-----	1.97	34.39		150-----	1.90	34.37	27.50	155-----	1.90	34.39		150-----	1.90	34.37	27.50
206-----	2.48	34.55		200-----	2.40	34.53	27.58	206-----	2.48	34.55		200-----	2.40	34.53	27.58
310-----	3.36	34.73		300-----	3.30	34.71	27.65	310-----	3.36	34.73		300-----	3.30	34.71	27.65
476-----	3.84	34.85		400-----	3.70	34.82	27.70	476-----	3.84	34.85		400-----	3.70	34.82	27.70
586-----	3.72	34.85		600-----	3.70	34.85	27.72	586-----	3.72	34.85		600-----	3.70	34.85	27.72
755-----	3.61	34.86		(800)---	3.55	34.86	27.74	755-----	3.61	34.86		(800)---	3.55	34.86	27.74

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5874; May 3; latitude 47°13.5' N., longitude 47°37'W.; depth 222 m.; dynamic height 971.008.								Station 5879; June 3; latitude 52°00'N.; longitude 50°01'W.; depth 2,634 m.; dynamic height 970.816.							
0	-0.54	33.15		0	-0.54	33.15	26.66	0	4.97	34.48		0	4.97	34.48	27.29
25	-0.51	33.15		25	-0.51	33.15	26.66	25	4.03	34.53		25	4.03	34.53	27.43
50	-0.58	33.17		50	-0.58	33.17	26.67	50	3.92	34.59		50	3.95	34.59	27.48
75	-0.70	33.29		75	-0.70	33.29	26.77	75	2.96	34.63		75	2.95	34.63	27.61
100	-0.36	33.50		100	-0.36	33.50	26.93	101	2.84	34.70		100	2.85	34.70	27.68
149	0.72	33.96		150	0.75	33.96	27.25	152	3.01			150	3.00	34.78	27.73
199	1.34	34.15		200	1.35	34.15	27.36	203	3.26	34.82		200	3.25	34.82	27.74
Station 5875; May 3; latitude 47°12'N., longitude 47°58'W.; depth 172 m.; dynamic height 971.036.								304	3.15	34.82		300	3.15	34.82	27.75
0	-0.98	32.98		0	-0.98	32.98	26.53	394	3.21	34.84		400	3.20	34.84	27.76
25	-0.96	32.98		25	-0.96	32.98	26.53	590	3.28	34.86		600	3.30	34.86	27.77
51	-0.96	32.97		50	-0.95	32.98	26.53	787	3.32	34.88		800	3.30	34.88	27.78
76	-0.98	33.02		75	-1.00	33.02	26.57	986	3.32	34.885		1,000	3.30	34.89	27.79
101	-0.81	33.24		100	-0.85	33.23	26.73	1,486	3.32	34.90					
152	0.51	33.84		150	0.45	33.82	27.15	Station 5880; June 3; latitude 51°43.5'N., longitude 50°21'W.; depth 1,088 m.; dynamic height 970.913.							
Station 5876; May 3; latitude 47°09'N., longitude 48°29'W.; depth 125 m.; dynamic height 971.030.								0	2.17	31.75		0	2.17	31.75	25.38
0	-0.51	33.03		0	-0.51	33.03	26.56	25	-1.20	33.44		25	-1.20	33.44	26.92
26	-0.48	33.04		25	-0.50	33.04	26.57	50	-0.68	33.70		50	-0.68	33.70	27.11
77	-0.47	33.04		50	-0.45	33.04	26.57	75	0.07	33.92		75	0.07	33.92	27.26
103	-0.58	33.11		75	-0.60	33.09	26.60	99	0.64	34.09		100	0.65	34.10	27.36
	-0.27	33.50		100	-0.35	33.46	26.90	149	1.67			150	1.70	34.37	27.51
Station 5877; May 3; latitude 47°13'N.; longitude 49°13'W.; depth 91 m.; dynamic height 971.026.								199	2.48	34.56		200	2.50	34.56	27.60
0	-0.39	33.02		0	-0.39	33.02	26.55	298	2.95	34.76		300	2.95	34.76	27.72
24	-0.43	33.02		25	-0.45	33.02	26.55	329	3.01	34.77		400	3.15	34.80	27.73
49	-0.45	33.02		50	-0.45	33.02	26.55	502	3.24	34.84		600	3.25	34.85	27.76
73	-0.31	33.30		75	-0.30	33.34	26.80	682	3.24			800	3.30	34.86	27.77
Station 5878; June 3; latitude 52°03'N., longitude 49°38'W.; depth 3,127 m.; dynamic height 970.842.								877	3.30	34.865		(1,000)	3.30	34.87	27.78
0	7.07	34.50		0	7.07	34.50	27.04	Station 5881; June 3; latitude 51°41'N., longitude 50°25'W.; depth 608 m.; dynamic height 970.924.							
25	5.46	34.48		25	5.46	34.48	27.23	0	3.27	32.86		0	3.27	32.86	26.18
50	3.53	34.41		50	3.53	34.41	27.38	22	0.65	33.41		25	0.20	33.33	26.77
74	3.03	34.55		75	3.00	34.55	27.55	44	-1.12	33.47		50	-1.00	33.51	26.97
99	2.74	34.63		100	2.75	34.63	27.63	65	-0.62	33.63		75	-0.40	33.72	27.12
149	2.71			150	2.70	34.70	27.69	87	-0.18	33.87		100	0.10	33.96	27.28
198	3.06	34.75		200	3.05	34.75	27.70	131	0.77	34.13		150	1.05	34.21	27.43
297	3.16	34.82		300	3.15	34.82	27.75	174	1.38	34.31		200	1.80	34.42	27.55
390	3.19	34.84		400	3.20	34.84	27.76	261	2.67	34.65		300	2.90	34.70	27.68
584	3.34	34.865		600	3.35	34.865	27.76	284	2.83	34.68		400	3.15	34.79	27.72
777	3.37	34.87		800	3.40	34.87	27.77	460	3.23	34.83		(600)	3.30	34.87	27.78
974	3.36	34.87		1,000	3.35	34.87	27.77	Station 5882; June 3; latitude 51°39.5'N., longitude 50°36'W.; depth 318 m.; dynamic height 970.933.							
1,471	3.29	34.90						0	3.10	32.73		0	3.10	32.73	26.09
								24	1.11	32.99		25	1.10	33.01	26.47
								48	1.62	33.70		50	1.60	33.72	27.00
								72	-0.14	33.84		75	-0.15	33.85	27.21
								96	0.50	33.99		100	0.60	34.01	27.29
								144	1.27			150	1.35	34.19	27.39
								192	1.68	34.33		200	1.75	34.35	27.49
								288	2.79	34.66		300	2.95	34.71	27.68

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5883; June 3; latitude 51°39' N., longitude 50°56' W.; depth 332 m.; dynamic height 970.955.								Station 5888; June 4; latitude 51°29' N., longitude 53°56' W.; depth 348 m.; dynamic height 971.046.							
0	0.84	31.65		0	0.84	31.65	25.39	0	2.15	31.83		0	2.15	31.83	25.46
22	2.10	33.29		25	2.00	33.30	26.63	25	0.92	32.95		25	0.92	32.95	26.42
43	-0.02	33.37		50	-0.20	33.42	26.87	50	-1.00	33.11		50	-1.00	33.11	26.64
64	-0.38	33.53		75	-0.30	33.64	27.04	75	-1.21	33.20		75	-1.21	33.20	26.72
85	-0.16	33.73		100	0.05	33.84	27.19	100	-1.37	33.33		100	-1.37	33.33	26.83
128	0.51	34.01		150	0.90	34.12	27.37	150	-1.00	33.50		150	-1.00	33.50	26.96
171	1.19	34.21		200	1.60	34.31	27.47	200	-0.22	33.81		200	-0.22	33.81	27.18
256	2.27	34.47		(300)	2.75	34.58	27.59	300	1.06	34.18		300	1.06	34.18	27.40
Station 5884; June 3; latitude 51°34.5' N., longitude 51°31' W.; depth 399 m.; dynamic height 970.964.								Station 5889; June 4; latitude 50°58.5' N., longitude 53°07' W.; depth 434 m.; dynamic height 970.997.							
0	2.91	33.12		0	2.91	33.12	26.42	0	3.54	33.03		0	3.54	33.03	26.29
27	0.15	33.15		25	0.30	33.15	26.62	25	0.48	33.05		25	0.48	33.05	26.54
54	-0.76	33.19		50	-0.70	33.18	26.69	50	-1.28	33.21		50	-1.28	33.21	26.73
81	-0.90	33.40		75	-0.90	33.33	26.82	75	-1.39	33.39		75	-1.39	33.39	26.88
108	0.19	33.89		100	-0.15	33.78	27.15	100	-0.97	33.53		100	-0.97	33.53	26.98
163	0.46			150	0.40	34.01	27.31	150	-0.05	33.83		150	-0.05	33.83	27.18
216	1.40	34.24		200	1.10	34.18	27.40	200	0.57	34.03		200	0.57	34.03	27.31
324	2.46	34.56		300	2.25	34.49	27.56	300	1.95	34.38		300	1.95	34.38	27.50
375	3.08	34.75		(400)	3.35	34.83	27.73	398	2.65	34.61		400	2.65	34.61	27.63
Station 5885; June 4; latitude 51°30.5' N., longitude 52°13' W.; depth 501 m.; dynamic height 970.978.								Station 5890; June 4; latitude 51°02' N., longitude 52°41' W.; depth 416 m.; dynamic height 971.013.							
0	2.84	33.15		0	2.84	33.15	26.44	0	3.45	33.03		0	3.45	33.03	26.30
24	2.39	33.19		25	2.30	33.19	26.53	25	1.60	33.09		25	1.60	33.09	26.49
47	-0.58	33.22		50	-0.60	33.23	26.72	50	-1.06	33.17		50	-1.06	33.17	26.69
71	-0.76	33.35		75	-0.80	33.39	26.86	75	-1.22	33.19		75	-1.22	33.19	26.71
95	-0.81	33.57		100	-0.80	33.60	27.03	99	-1.13	33.37		100	-1.15	33.38	26.87
141	0.37	33.84		150	0.60	33.90	27.20	149	0.05	33.81		150	0.05	33.82	27.18
188	1.27	34.18		200	1.45	34.23	27.41	199	0.80	34.07		200	0.80	34.07	27.33
283	2.37			300	2.50	34.50	27.55	298	1.85	34.29		300	1.85	34.30	27.44
393	2.82	34.68		400	2.85	34.69	27.67	386	2.53	34.56		(400)	2.65	34.61	27.63
Station 5886; June 4; latitude 51°31' N., longitude 52°50' W.; depth 316 m.; dynamic height 970.973.								Station 5891; June 4; latitude 51°05.5' N., longitude 52°12' W.; depth 279 m.; dynamic height 971.011.							
0	2.85	33.15		0	2.85	33.15	26.44	0	3.22	33.15		0	3.22	33.15	26.42
23	2.21	33.12		25	1.90	33.12	26.50	24	2.07	33.11		25	2.00	33.11	26.48
46	-0.56	33.27		50	-0.65	33.31	26.79	49	0.34	33.13		50	0.30	33.13	26.61
70	-0.92	33.53		75	-0.90	33.57	27.02	73	-0.54	33.19		75	-0.60	33.21	26.66
93	-0.39	33.71		100	-0.30	33.74	27.12	97	-1.00	33.46		100	-1.00	33.49	26.95
139	0.12	33.85		150	0.30	33.90	27.22	146	0.01	33.79		150	0.05	33.81	27.17
185	0.99	34.08		200	1.20	34.14	27.36	195	0.57	33.99		200	0.60	34.01	27.29
278	2.21	34.44		(300)	2.45	34.52	27.57	263	1.31	34.23					
Station 5887; June 4; latitude 51°32' N., longitude 53°26' W.; depth 408 m.; dynamic height 971.015.								Station 5892; June 4; latitude 51°09' N., longitude 51°42' W.; depth 224 m.; dynamic height 970.994.							
0	0.97	31.66		0	0.97	31.66	25.39	0	3.11	33.14		0	3.11	33.14	26.41
27	-0.64	33.09		25	-0.45	32.98	26.52	25	0.81	33.17		25	0.81	33.17	26.62
53	-1.22	33.17		50	-1.20	33.16	26.69	51	-0.58	33.23		50	-0.55	33.23	26.72
80	-1.36	33.31		75	-1.35	33.28	26.79	76	-0.86	33.27		75	-0.85	33.27	26.76
106	-1.07	33.54		100	-1.20	33.49	26.96	102	-0.74	33.46		100	-0.80	33.44	26.90
160	-0.24	33.79		150	-0.35	33.75	27.13	152	0.33	33.93		150	0.30	33.91	27.23
214	0.39	34.03		200	0.35	33.97	27.29	203	1.20	34.20		200	1.15	34.20	27.41
320	2.12	34.43		300	1.90	34.36	27.49								
355	2.33	34.49		(400)	2.60	34.55	27.58								

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, °C.	Salin- ity, ‰	σ_t
Station 5893; June 4; latitude 51°13.5' N., longitude 51°16' W.; depth 263 m.; dynamic height 970.999.								Station 5898; June 5; latitude 51°24' N., longitude 49°34' W.; depth 2,250 m.; dynamic height 970.829.							
0	2.92	33.15		0	2.92	33.15	26.44	0	5.09	34.51		0	5.09	34.51	27.30
25	1.55	33.15		25	1.55	33.15	26.54	25	4.71	34.51		25	4.71	34.51	27.34
51	-0.54	33.17		50	-0.50	33.17	26.67	50	3.87	34.52		50	3.87	34.52	27.44
76	-0.91	33.34		75	-0.90	33.34	26.83	75	3.21	34.63		75	3.21	34.63	27.59
102	-0.62	33.57		100	-0.65	33.55	26.99	100	2.92	34.69		100	2.92	34.69	27.67
153	0.51	33.81		150	0.45	33.80	27.13	150	2.98	34.75		150	2.98	34.75	27.71
204	1.03	34.15		200	1.00	34.12	27.36	200	3.05	34.78		200	3.05	34.78	27.72
								300	3.13	34.81		300	3.13	34.81	27.74
								400	3.15	34.82		400	3.15	34.82	27.75
								600	3.25	34.85		600	3.25	34.85	27.76
								801	3.28	34.88		800	3.30	34.85	27.77
								1,002	3.35	34.88		1,000	3.35	34.88	27.77
								1,505	3.33	34.89					
Station 5894; June 4; latitude 51°16' N., longitude 50°48' W.; depth 269 m.; dynamic height 970.993.															
0	3.11	33.13		0	3.11	33.13	26.41								
25	1.62	33.14		25	1.62	33.14	26.54								
51	-0.45	33.22		50	-0.45	33.21	26.71								
76	-0.19	33.32		75	-0.20	33.31	26.77								
102	-0.17	33.69		100	-0.15	33.66	27.06								
153	0.14	33.91		150	0.10	33.89	27.22								
204	1.17	34.16		200	1.10	34.14	27.37								
250	1.57	34.30													
Station 5895; June 5; latitude 51°19.5' N., longitude 50°26' W.; depth 324 m.; dynamic height 970.952.															
0	2.04	32.51		0	2.04	32.51	26.00								
25	0.08	33.31		25	0.08	33.31	26.76								
50	-0.92	33.47		50	-0.92	33.47	26.94								
76	-0.58	33.69		75	-0.60	33.68	27.08								
101	0.17	33.89		100	0.15	33.88	27.21								
151	1.44	34.23		150	1.40	34.23	27.42								
202	1.99	34.42		200	1.95	34.42	27.54								
303	2.69	34.61		300	2.65	34.61	27.63								
Station 5896; June 5; latitude 51°17' N., longitude 50°06' W.; depth 619 m.; dynamic height 970.961.															
0	0.70	31.89		0	0.70	31.89	25.59								
25	1.16	33.04		25	1.16	33.04	26.49								
51	-1.24	33.46		50	-1.25	33.45	26.93								
76	-0.76	33.68		75	-0.80	33.67	27.09								
101	-0.41	33.80		100	-0.45	33.79	27.17								
152	1.04	34.18		150	0.95	34.16	27.39								
203	1.74	34.38		200	1.70	34.37	27.51								
304	2.67	34.67		300	2.65	34.66	27.67								
395	3.21	34.80		400	3.25	34.80	27.72								
595	3.24	34.80		600	3.25	34.80	27.72								
Station 5897; June 5; latitude 51°18.5' N., longitude 49°58' W.; depth 1,060 m.; dynamic height 970.935.															
0	-0.11	31.28		0	-0.11	31.28	25.13								
25	1.23	33.15		25	1.23	33.15	26.58								
51	-0.89	33.60		50	-0.90	33.60	27.04								
76	-0.13	33.89		75	-0.15	33.89	27.24								
101	0.48	34.04		100	0.45	34.04	27.32								
152	1.41	34.28		150	1.40	34.27	27.46								
203	2.04	34.47		200	2.00	34.46	27.56								
304	2.78	34.71		300	2.75	34.70	27.69								
400	3.16	34.80		400	3.15	34.80	27.73								
599	3.27	34.85		600	3.25	34.85	27.76								
797	3.28	34.86		800	3.30	34.86	27.77								
1,003	3.30	34.87		1,000	3.30	34.87	27.78								
0	0.79	31.84		0	0.79	31.84	25.54								
25	-0.71	33.21		25	-0.71	33.21	26.72								
49	-0.71	33.57		50	-0.70	33.58	27.01								
74	0.10	33.88		75	0.15	33.89	27.22								
98	0.80	34.15		100	0.85	34.16	27.40								
147	1.74	34.38		150	1.80	34.39	27.52								
197	2.50	34.59		200	2.50	34.59	27.62								
295	2.91	34.74		300	2.95	34.74	27.70								
363	3.04	34.78		400	3.10	34.80	27.74								
545	3.23	34.83		600	3.25	34.84	27.75								
728	3.28	34.84		800	3.30	34.85	27.76								
910	3.30			(1,000)	3.30	34.86	27.77								
Station 5901; June 5; latitude 50°58' N., longitude 49°45' W.; depth 1,037 m.; dynamic height 970.920.															

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				σ_t	Observed values			Scaled values				σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters		Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰			
Station 5902; June 5; latitude 50°51' N., longitude 50°20' W.; depth 1,021 m.; dynamic height 970.974.															
0	3.09	32.73	0	3.09	32.73	26.09		0	3.30	33.12	0	3.30	33.12	26.38	
25	0.24	33.19	25	0.24	33.19	26.66		25	2.98	33.19	25	2.98	33.19	26.48	
51	-0.94	33.43	50	-0.95	33.42	26.90		50	-0.02	33.35	50	-0.02	33.35	26.80	
76	-0.25	33.71	75	-0.30	33.70	27.09		75	-0.54	33.60	75	-0.54	33.60	27.02	
101	0.21	33.88	100	0.20	33.88	27.21		100	0.06	33.77	100	0.06	33.77	27.14	
152	0.51	34.04	150	0.50	34.03	27.31		150	0.77	34.03	150	0.77	34.03	27.30	
203	1.70	34.27	200	1.65	34.26	27.43		200	1.23	34.23	200	1.23	34.23	27.43	
304	2.51	34.55	300	2.50	34.54	27.58									
404	3.31	34.76	400	3.30	34.75	27.68									
602	3.58	34.86	600	3.60	34.86	27.74									
797	3.53	34.87	800	3.55	34.87	27.75									
986	3.39	34.89	1,000	3.35	34.89	27.78									
Station 5903; June 5; latitude 50°47' N., longitude 50°41' W.; depth 591 m.; dynamic height 970.942.															
0	2.85	32.75	0	2.85	32.75	26.12		0	4.43	32.75	0	4.43	32.75	25.98	
25	2.37	33.14	25	2.37	33.14	26.49		25	2.41	33.16	25	2.41	33.16	26.49	
51	1.12	33.61	50	1.15	33.60	26.93		50	0.13	33.19	50	0.13	33.19	26.66	
76	0.89	33.96	75	0.90	33.95	27.23		75	-1.23	33.31	75	-1.23	33.31	26.81	
101	0.81	34.08	100	0.80	34.08	27.33		100	-0.35	33.60	100	-0.35	33.60	27.01	
152	1.45	34.27	150	1.40	34.25	27.44		151	0.39	33.89	150	0.40	33.89	27.21	
203	2.06	34.44	200	2.05	34.44	27.54		201	0.82	34.07	200	0.80	34.06	27.32	
304	2.90	34.70	300	2.85	34.69	27.67		271	1.93	34.41	(300)	2.20	34.49	27.57	
374	3.13	34.77	400	3.20	34.78	27.71									
571	3.26	34.81													
Station 5904; June 6; latitude 50°43.5' N., longitude 50°57' W.; depth 352 m.; dynamic height 970.972.															
0	2.96	33.11	0	2.96	33.11	26.40		0	3.19	31.84	0	3.19	31.84	25.38	
25	1.92	33.15	25	1.92	33.15	26.52		25	0.35	33.05	25	0.35	33.05	26.54	
50	-0.24	33.28	50	-0.24	33.28	26.75		50	-1.49	33.08	50	-1.49	33.08	26.63	
75	-0.60	33.45	75	-0.60	33.45	26.90		75	-1.48	33.13	75	-1.48	33.13	26.67	
100	-0.56	33.73	100	-0.56	33.73	27.12		100	-1.16	33.23	100	-1.16	33.23	26.74	
150	0.59	34.02	150	0.59	34.02	27.30		151	-0.61	33.61	150	-0.60	33.61	27.03	
199	1.68	34.33	200	1.70	34.33	27.47		201	0.72	34.04	200	0.70	34.04	27.31	
299	2.52	34.58	300	2.55	34.58	27.61		246	1.19	34.21					
Station 5905; June 6; latitude 50°40' N., longitude 51°12' W.; depth 334 m.; dynamic height 970.937.															
0	3.76	33.00	0	3.76	33.00	26.24		0	3.51	33.18	0	3.51	33.18	26.41	
24	2.59	33.07	25	2.50	33.08	26.42		25	1.11	33.23	25	1.25	33.23	26.63	
48	1.32	33.69	50	1.25	33.72	27.02		52	0.05	33.25	50	0.05	33.24	26.71	
72	0.95	34.00	75	0.95	34.03	27.28		77	-0.47	33.39	75	-0.45	33.37	26.83	
96	1.32	34.17	100	1.35	34.19	27.39		103	-0.10	33.64	100	-0.15	33.61	27.02	
144	1.64	34.33	150	1.70	34.34	27.48		155	0.57	33.97	150	0.50	33.94	27.24	
193	2.16	34.44	200	2.20	34.45	27.54		206	1.39	34.25	200	1.30	34.22	27.42	
289	2.79	34.65	300	2.85	34.67	27.66		289	2.60	34.57	(300)	2.75	34.60	27.61	
Station 5906; June 6; latitude 50°34.5' N., longitude 51°39' W.; depth 238 m.; dynamic height 970.953.															
0	3.72	33.24	0	3.72	33.24	26.44		0	3.48	33.22	0	3.48	33.22	26.44	
23	2.79	33.25	25	2.60	33.25	26.54		24	2.42	33.23	25	2.30	33.23	26.56	
46	0.30	33.46	50	0.20	33.49	26.90		47	0.26	33.33	50	0.10	33.35	26.80	
68	0.07	33.67	75	0.10	33.73	27.09		71	-0.35	33.55	75	-0.30	33.58	26.99	
91	0.25	33.84	100	0.35	33.89	27.21		94	-0.06	33.73	100	0.00	33.77	27.14	
137	0.76	34.05	150	0.95	34.11	27.35		141	0.59	33.99	150	0.70	34.02	27.30	
182	1.48	34.29	200	1.80	34.36	27.50		188	1.24	34.16	200	1.40	34.21	27.41	
214	2.02	34.41						282	2.63	34.58	(300)	2.90	34.66	27.65	

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5912; June 6; latitude 50°09' N., longitude 50°40' W.; depth 324 m.; dynamic height 970.955.								Station 5916; June 7; latitude 50°26' N., longitude 49°16' W.; depth 2,058 m.; dynamic height 970.847.							
0	3.53	33.09		0	3.53	33.09	26.32	0	5.67	34.25		0	5.67	34.25	27.02
25	1.86	33.16		25	1.86	33.16	26.53	25	4.91	34.39		25	4.91	34.39	27.22
50	-0.67	33.36		50	-0.67	33.36	26.83	51	3.25	34.48		50	3.25	34.48	27.46
75	0.11	33.79		75	0.11	33.79	27.14	76	2.86	34.59		75	2.85	34.58	27.58
100	0.38	33.92		100	0.38	33.92	27.24	101	2.85	34.61		100	2.85	34.61	27.61
150	0.91	34.09		150	0.91	34.09	27.34	152	2.98	34.73		150	2.95	34.73	27.69
199	1.77	34.32		200	1.75	34.32	27.47	203	3.17	34.78		200	3.15	34.78	27.71
299	2.97	34.69		300	3.00	34.69	27.66	304	3.33	34.84		300	3.35	34.84	27.74
								391	3.31	34.84		400	3.3	34.84	27.75
								584	3.3	34.84		600	3.30	34.84	27.75
								775	3.25	34.83		800	3.25	34.835	27.75
								972	3.31	34.87		1,000	3.35	34.87	27.77
								1,472	3.28	34.88					
Station 5913; June 6; latitude 50°11' N., longitude 50°30' W.; depth 635 m.; dynamic height 970.935.								Station 5917; June 7; latitude 50°00' N., longitude 49°08' W.; depth 1,719 m.; dynamic height 970.837.							
0	3.70	33.20		0	3.70	33.20	26.41	0	6.45	34.34		0	6.45	34.34	26.99
25	2.63	33.43		25	2.63	33.43	26.69	23	5.06	34.35		25	4.90	34.35	27.19
50	-0.25	33.72		50	-0.25	33.72	27.11	46	3.07	34.55		50	3.00	34.55	27.55
75	0.38	33.90		75	0.38	33.90	27.22	70	3.02	34.60		75	3.00	34.61	27.60
100	0.70	34.03		100	0.70	34.03	27.30	93	2.98	34.66		100	3.00	34.67	27.65
150	1.49	34.23		150	1.49	34.23	27.41	139	3.06	34.74		150	3.15	34.76	27.70
200	1.92	34.38		200	1.92	34.38	27.50	185	3.46	34.79		200	3.40	34.79	27.70
300	2.91	34.65		300	2.91	34.65	27.64	278	3.26	34.81		300	3.25	34.81	27.73
403	3.57	34.84		400	3.55	34.83	27.71	349	3.24	34.83		400	3.20	34.83	27.75
536	3.41	34.87		(600)	3.60	34.87	27.75	526	3.16	34.83		600	3.15	34.83	27.75
								705	3.11	34.83		800	3.10	34.84	27.77
								892	3.12	34.84		1,000	3.10	34.85	27.78
								1,377	3.30	34.89					
Station 5914; June 6; latitude 50°17' N., longitude 50°07' W.; depth 1,075 m.; dynamic height 971.001.								Station 5918; June 7; latitude 49°50' N., longitude 49°35' W.; depth 1,188 m.; dynamic height 970.955.							
0	2.86	33.05		0	2.86	33.05	26.36	0	4.10	32.81		0	4.10	32.81	26.07
24	1.42	33.19		25	1.35	33.19	26.60	25	0.98	33.31		25	0.98	33.31	26.71
49	-0.28	33.30		50	-0.25	33.30	26.76	51	-0.23	33.59		50	-0.25	33.59	27.00
73	-0.68	33.49		75	-0.70	33.50	26.95	76	0.10	33.76		75	0.05	33.75	27.12
97	-0.32	33.67		100	-0.30	33.68	27.07	101	0.89	34.01		100	0.90	34.01	27.28
146	0.58	33.97		150	0.65	33.99	27.27	152	1.16	34.18		150	1.15	34.17	27.39
195	1.27	34.21		200	1.30	34.23	27.42	203	2.23	34.40		200	2.15	34.39	27.49
292	2.28	34.49		300	2.35	34.51	27.57	304	2.56	34.61		300	2.55	34.60	27.63
375	3.02	34.66		400	3.15	34.69	27.64	394	3.14	34.72		400	3.15	34.72	27.67
566	3.59	34.81		600	3.60	34.82	27.71	588	3.49	34.85		600	3.50	34.85	27.74
761	3.52	34.85		800	3.55	34.86	27.74	781	3.57	34.89		800	3.55	34.89	27.76
965	3.52	34.88		1,000	3.50	34.88	27.76	981	3.41			1,000	3.40	34.89	27.78
Station 5915; June 7; latitude 50°20.5' N., longitude 49°46' W.; depth 1,326 m.; dynamic height 970.958.								Station 5919; June 7; latitude 49°42.5' N., longitude 49°58' W.; depth 615 m.; dynamic height 971.003.							
0	3.30	32.51		0	3.30	32.51	25.89	0	3.43	33.18		0	3.43	33.18	26.41
24	2.66	33.30		25	2.55	33.33	26.61	24	1.52	33.19		25	1.40	33.19	26.59
49	0.24	33.63		50	0.20	33.65	27.03	48	0.28	33.24		50	0.20	33.24	26.70
73	0.39	33.84		75	0.40	33.86	27.19	72	-0.03	33.33		75	-0.05	33.36	26.80
98	0.59	33.99		100	0.60	34.00	27.28	96	-0.14	33.61		100	-0.15	33.65	27.05
146	1.36	34.16		150	1.40	34.17	27.38	144	0.35	33.91		150	0.40	33.94	27.25
195	1.92	34.31		200	1.95	34.32	27.46	192	1.05	34.12		200	1.15	34.15	27.37
293	2.49	34.58		300	2.55	34.59	27.62	288	2.27	34.47		300	2.35	34.50	27.66
386	2.91	34.71		400	2.95	34.72	27.69	397	3.02	34.67		400	3.05	34.67	27.64
582	3.25	34.82		600	3.25	34.82	27.74	587	3.66	34.86		600	3.70	34.87	27.74
780	3.29	34.83		800	3.30	34.83	27.74								
980	3.40	34.88		1,000	3.40	34.88	27.77								

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5920; June 7; latitude 49°32' N., longitude 50°32' W.; depth 329 m.; dynamic height 971.002.								Station 5925; June 8; latitude 48°55.5' N., longitude 52°30' W.; depth 324 m.; dynamic height 971.051.							
0	4.01	32.94		0	4.01	32.91	26.17	0	3.54	33.03		0	3.54	33.03	26.28
26	1.37	33.23		25	1.40	33.23	26.62	25	2.63	33.06		25	2.63	33.06	26.39
53	-0.96	33.24		50	-0.85	33.24	26.74	49	1.02	33.21		50	1.00	33.21	26.60
79	-0.29	33.50		75	-0.35	33.46	26.90	74	-0.44	33.20		75	-0.50	33.20	26.74
105	-0.05	33.69		100	-0.10	33.65	27.04	99	-0.24	33.34		100	-0.25	33.35	26.80
157	0.77	34.01		150	0.60	33.98	27.26	148	-0.45	33.59		150	-0.45	33.60	27.02
210	1.42	34.16		200	1.30	34.13	27.34	197	0.20	33.84		200	0.20	33.85	27.19
315	2.91	34.62		300	2.70	34.55	27.57	296	1.49	34.25		300	1.55	34.27	27.44
Station 5921; June 7; latitude 49°21.5' N., longitude 51°06' W.; depth 326 m.; dynamic height 971.056.								Station 5926; June 8; latitude 48°51.5' N., longitude 52°40' W.; depth 224 m.; dynamic height 971.077.							
0	3.79	31.78		0	3.79	31.78	25.27	0	3.41	32.83		0	3.41	32.83	26.14
26	1.39	33.11		25	1.45	33.06	26.18	26	-0.70	33.01		25	-0.70	33.01	26.56
52	-0.65	33.12		50	-0.60	33.12	26.63	51	-1.33	33.04		50	-1.35	33.04	26.60
77	-1.14	33.13		75	-1.10	33.13	26.66	77	-1.42	33.15		75	-1.45	33.14	26.68
103	-1.43	33.23		100	-1.40	33.23	26.75	102	-1.41	33.17		100	-1.40	33.17	26.70
154	-0.21	33.67		150	-0.35	33.64	27.04	154	-1.44	33.23		150	-1.45	33.22	26.74
206	0.73	33.99		200	0.60	33.95	27.24	205	-0.02	33.75		200	-0.20	33.69	27.08
309	2.53	34.50		300	2.40	34.45	27.52								
Station 5922; June 8; latitude 49°12' N., longitude 51°35' W.; depth 315 m.; dynamic height 971.035.								Station 5927; June 8; latitude 48°48.5' N., longitude 52°48' W.; depth 150 m.; dynamic height 971.101.							
0	3.88	32.45		0	3.88	32.45	25.80	0	3.54	31.58		0	3.54	31.58	25.13
25	2.21	33.03		25	2.21	33.03	26.40	23	0.45	32.73		25	0.25	32.77	26.32
50	-0.36	33.17		50	-0.36	33.17	26.66	46	-0.82	32.98		50	-1.00	33.00	26.55
75	-0.80	33.25		75	-0.80	33.25	26.74	68	-1.30	33.09		75	-1.35	33.09	26.63
100	-0.89	33.32		100	-0.89	33.32	26.81	91	-1.39	33.11		100	-1.40	33.12	26.66
150	-0.02	33.72		150	-0.02	33.72	27.10	132	-1.44	33.15		(150)	-1.45	33.17	26.70
200	0.76	34.00		200	0.76	34.00	27.28								
300	2.82	34.61		300	2.82	34.61	27.61								
Station 5923; June 8; latitude 49°05' N., longitude 51°59' W.; depth 303 m.; dynamic height 971.005.								Station 5928; June 8; latitude 48°43.5' N., longitude 52°57' W.; depth 110 m.; dynamic height 971.107.							
0	3.83	32.88		0	3.83	32.88	26.14	0	3.22	31.74		0	3.22	31.74	25.29
25	2.02	33.11		25	2.02	33.11	26.48	22	0.10	32.57		25	-0.20	32.63	26.23
50	0.09	33.19		50	0.09	33.19	26.67	43	-0.99	32.89		50	-1.10	32.93	26.50
75	0.11	33.40		75	0.11	33.40	26.84	65	-1.23	32.99		75	-1.30	33.00	26.56
109	-0.40	33.61		100	-0.40	33.61	27.03	82	-1.29	33.01		(100)	-1.35	33.02	26.58
150	0.60	33.94		150	0.60	33.94	27.23								
199	1.36	34.19		200	1.35	34.19	27.39								
289	2.76	34.59		(300)	2.90	34.64	27.63								
Station 5924; June 8; latitude 49°06' N., longitude 52°14' W.; depth 300 m.; dynamic height 971.011.								Station 5929; June 8; latitude 48°38' N., longitude 52°44' W.; depth 218 m.; dynamic height 971.096.							
0	3.44	33.07		0	3.44	33.07	26.32	0	3.78	32.01		0	3.78	32.01	25.46
24	2.10	33.13		25	2.00	33.13	26.50	25	-1.01	32.78		25	-1.01	32.78	26.38
49	0.49	33.20		50	0.45	33.21	26.67	51	-1.17	33.00		50	-1.20	33.00	26.56
73	0.22	33.35		75	0.15	33.38	26.81	76	-1.32	33.07		75	-1.35	33.07	26.62
98	-0.35	33.52		100	-0.35	33.54	26.96	102	-1.31	33.13		100	-1.30	33.13	26.66
146	0.49	33.87		150	0.50	33.90	27.21	151	-1.37	33.15		150	-1.35	33.15	26.68
195	1.01	34.11		200	1.05	34.14	27.37	202	-1.01	33.38		200	-1.05	33.37	26.85
273	2.24	34.44		(300)	2.75	34.55	27.57								
Station 5930; June 8; latitude 48°31' N., longitude 52°32' W.; depth 225 m.; dynamic height 971.095.															
0	3.38	31.53		0	3.38	31.53	25.11	0	3.38	31.53		0	3.38	31.53	25.11
25	1.52	32.81		25	1.52	32.81	26.28	25	-0.78	33.10		25	-0.78	33.10	26.62
49	-0.78	33.10		50	-0.78	33.10	26.62	75	-1.29	33.10		75	-1.29	33.10	26.64
98	-1.29	33.10		100	-1.29	33.10	26.64	100	-1.32	33.14		100	-1.32	33.14	26.67
151	-1.33	33.14		150	-1.35	33.18	26.71	151	-1.33	33.14		150	-1.35	33.18	26.71
201	-0.76	33.49		200	-0.80	33.49	26.94	201	-0.76	33.49		200	-0.80	33.49	26.94

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5931; June 8; latitude 48°20.5' N., longitude 52°06' W.; depth 199 m.; dynamic height 971.090.								Station 5937; June 9; latitude 47°32' N., longitude 50°14' W.; depth 102 m.; dynamic height 971.075.							
0	2.51	32.13		0	2.51	32.13	26.66	0	2.08	32.87		0	2.08	32.87	26.28
27	-0.04	32.71		25	0.00	32.67	26.25	25	2.02	32.90		25	2.02	32.90	26.31
56	-1.44	32.97		50	-1.35	32.94	26.52	50	1.18	33.02		50	1.18	33.02	26.47
83	-1.49	32.99		75	-1.50	32.98	26.55	75	0.14	33.13		75	0.15	33.13	26.60
110	-1.54	33.13		100	-1.55	33.07	26.63	101	-0.29	33.21		100	-0.25	33.21	26.70
166	-1.02	33.38		150	-1.15	33.31	26.81								
Station 5932; June 8; latitude 48°13' N., longitude 51°48' W.; depth 196 m.; dynamic height 971.090.								Station 5938; June 9; latitude 47°26' N., longitude 49°58' W.; depth 89 m.; dynamic height 971.063.							
0	2.37	32.69		0	2.37	32.69	26.11	0	2.50	32.92		0	2.50	32.93	26.30
29	0.42	32.87		25	0.65	32.85	26.36	18	2.29	32.94		25	1.95	32.95	26.36
59	-0.83	32.92		50	-0.55	32.90	26.45	39	1.01	33.02		50	0.40	33.12	26.59
88	-1.29	33.02		75	-1.15	32.97	26.53	60	-0.04	33.23		(75)	-0.40	33.37	26.83
117	-1.24	33.13		100	-1.30	33.06	26.61								
176	-1.02	33.27		150	-1.15	33.21	26.73								
Station 5933; June 8; latitude 48°04' N., longitude 51°28' W.; depth 205 m.; dynamic height 971.096.								Station 5939; June 9; latitude 47°41' N., longitude 49°53' W.; depth 123 m.; dynamic height 971.080.							
0	2.19	32.71		0	2.19	32.71	26.15	0	2.19	32.85		0	2.19	32.85	26.26
24	2.18			25	2.15	32.73	26.17	25	2.15	32.87		25	2.15	32.87	26.28
48	-0.19	32.87		50	-0.40	32.88	26.44	50	1.31	32.97		50	1.31	32.97	26.42
72	-1.22	32.96		75	-1.25	32.97	26.54	76	0.78	33.05		75	0.80	33.05	26.52
96	-1.28	33.03		100	-1.25	33.04	26.59	101	-0.17	33.24		100	-0.15	33.23	26.71
144	-0.95	33.21		150	-0.90	33.22	26.73								
192	-0.57	33.29		200	-0.50	33.30	26.77								
Station 5934; June 8; latitude 47°56' N., longitude 51°07' W.; depth 161 m.; dynamic height 971.079.								Station 5940; June 9; latitude 47°54' N., longitude 49°49' W.; depth 174 m.; dynamic height 971.078.							
0	1.94	32.80		0	1.94	32.80	26.24	0	2.40	32.78		0	2.40	32.78	26.19
25	1.91	32.81		25	1.91	32.81	26.26	23	2.06	32.77		25	1.85	32.77	26.22
51	0.25	32.88		50	0.35	32.87	26.39	46	-0.72	33.02		50	-0.90	33.04	26.58
76	-1.01	33.05		75	-0.95	33.04	26.58	69	-1.21	33.13		75	-1.30	33.14	26.67
102	-0.72	33.24		100	-0.80	33.22	26.72	92	-1.37	33.16		100	-1.35	33.19	26.72
153	-0.22	33.53		150	-0.25	33.51	26.94	138	-0.47	33.41		(150)	-0.15	33.49	26.92
Station 5935; June 8-9; latitude 47°47' N., longitude 50°48' W.; depth 132 m.; dynamic height 971.078.								Station 5941; June 9; latitude 48°12' N., longitude 49°42' W.; depth 227 m.; dynamic height 971.100.							
0	2.21	32.83		0	2.21	32.83	26.24	0	2.91	32.49		0	2.91	32.49	25.91
26	2.17	32.87		25	2.15	32.87	26.28	24	0.86	32.73		25	0.80	32.73	26.26
51	-0.14	32.93		50	0.00	32.93	26.46	49	-0.96	32.92		50	-1.00	32.93	26.49
77	-0.80	33.05		75	-0.75	33.04	26.58	73	-1.38	33.03		75	-1.30	33.04	26.59
103	-0.99	33.17		100	-1.00	33.15	26.68	98	-1.01	33.09		100	-1.00	33.09	26.62
								146	-1.48	33.11		150	-1.45	33.13	26.67
								195	-0.22	33.61		200	-0.05	33.65	27.04
Station 5942; June 9; latitude 48°35.5' N., longitude 49°33' W.; depth 681 m.; dynamic height 970.990.								Station 5943; June 9; latitude 48°35.5' N., longitude 49°33' W.; depth 681 m.; dynamic height 970.990.							
0	3.97	33.09		0	3.97	33.09	26.28	0	3.97	33.09		0	3.97	33.09	26.28
25	2.84	33.13		25	2.84	33.13	26.44	25	2.84	33.13		25	2.84	33.13	26.44
50	0.86	33.23		50	0.86	33.23	26.66	50	0.86	33.23		50	0.86	33.23	26.66
75	-0.21	33.52		75	-0.21	33.52	26.95	75	-0.21	33.52		75	-0.21	33.52	26.95
100	0.09	33.74		100	0.09	33.74	27.15	100	0.09	33.74		100	0.09	33.74	27.15
150	1.33	34.12		150	1.33	34.12	27.34	150	1.33	34.12		150	1.33	34.12	27.34
200	1.57	34.28		200	1.57	34.28	27.44	200	1.57	34.28		200	1.57	34.28	27.44
300	2.90	34.62		300	2.90	34.62	27.62	300	2.90	34.62		300	2.90	34.62	27.62
386	3.41	34.75		400	3.45	34.76	27.67	386	3.41	34.75		400	3.45	34.76	27.67
588	3.50	34.83		600	3.50	34.83	27.72	588	3.50	34.83		600	3.50	34.83	27.72

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5943; June 9; latitude 48°42' N., longitude 49°31' W.; depth 1,106 m.; dynamic height 970.960.													
0	4.38	33.29	0	4.38	33.29	26.40	0	7.57	34.40	0	7.57	34.40	26.88
24	2.18	33.44	25	2.15	33.45	26.75	25	6.65	34.40	25	6.65	34.40	27.02
48	1.80	33.81	50	1.80	33.84	27.07	49	4.65	34.46	50	4.60	34.46	27.31
72	1.54	33.99	75	1.80	34.00	27.21	74	2.88	34.46	75	2.90	34.46	27.49
96	1.42	34.05	100	1.35	34.06	27.29	98	4.38	34.74	100	4.40	34.75	27.56
144	1.46	34.25	150	1.50	34.26	27.44	148	4.34	34.82	150	4.25	34.82	27.64
192	1.87	34.35	200	2.00	34.37	27.49	197	3.16	34.69	200	3.15	34.69	27.64
288	2.86	34.63	300	2.90	34.64	27.63	295	3.95	34.89	300	3.90	34.89	27.73
369	3.10	34.70	400	3.20	34.72	27.67	390	3.41	34.85	400	3.40	34.85	27.75
553	3.50	34.79	600	3.55	34.81	27.70	575	3.40	34.85	600	3.40	34.85	27.75
737	3.62	34.85	800	3.60	34.86	27.74	752	3.40	34.89	800	3.40	34.89	27.78
934	3.56		(1 000)	3.55	34.86	27.74	947	3.38	34.895	1,000	3.35	34.90	27.79
							1,447	3.29	34.905				
Station 5944; June 9; latitude 49°07.5' N., longitude 49°26' W.; depth 1,485 m.; dynamic height 970.989.													
0	4.04	33.07	0	4.04	33.07	26.26	0	7.21	34.33	0	7.21	34.33	26.88
23	2.28	33.22	25	2.05	33.24	26.59	25	6.76	34.40	25	6.76	34.40	27.00
46	-0.06	33.43	50	-0.15	33.46	26.90	50	6.12	34.51	50	6.12	34.51	27.18
69	-0.32	33.61	75	-0.25	33.66	27.06	75	4.47	34.47	75	4.47	34.47	27.34
92	0.28	33.81	100	0.35	33.85	27.18	100	3.08	34.47	100	3.08	34.47	27.48
138	0.82	34.03	150	1.00	34.08	27.32	150	2.85	34.63	150	2.85	34.63	27.62
185	1.52	34.26	200	1.75	34.31	27.46	199	3.26	34.74	200	3.25	34.74	27.67
277	2.54	34.53	300	2.70	34.58	27.59	299	3.71	34.85	300	3.70	34.85	27.72
365	3.13	34.70	400	3.25	34.72	27.66	403	3.38	34.81	400	3.40	34.81	27.72
558	3.43	34.77	600	3.45	34.78	27.68	592	3.34	34.85	600	3.35	34.85	27.75
759	3.60	34.85	800	3.60	34.86	27.71	789	3.29	34.87	800	3.30	34.865	27.77
953	3.61	34.87	1,000	3.60	34.87	27.75	987	3.36	34.87	1,000	3.35	34.87	27.77
1,344	3.41	34.86					1,487	3.29	34.89				
Station 5945; June 9-10; latitude 49°29.5' N., longitude 49°14' W.; depth 1,646 m.; dynamic height 970.872.													
0	4.78	33.86	0	4.78	33.86	26.82	0	6.25	34.03	0	6.25	34.03	26.77
25	3.79	34.21	25	3.79	34.21	27.21	25	5.22	34.32	25	5.22	34.32	27.14
51	3.03	34.33	50	3.05	34.33	27.36	50	2.99	34.41	50	2.99	34.41	27.44
76	2.37	34.45	75	2.35	34.45	27.52	76	2.64	34.49	75	2.64	34.49	27.53
102	2.32	34.53	100	2.30	34.52	27.59	101	2.53	34.54	100	2.55	34.54	27.58
152	2.60	34.61	150	2.60	34.61	27.63	151	3.13	34.71	150	3.05	34.71	27.67
203	3.10	34.65	200	3.05	34.65	27.62	202	3.10	34.75	200	3.10	34.75	27.70
305	3.24	34.77	300	3.25	34.77	27.70	303	3.27	34.83	300	3.25	34.83	27.74
405	3.34	34.81	400	3.35	34.81	27.72	397	3.36	34.84	400	3.35	34.85	27.75
601	3.30	34.835	600	3.30	34.84	27.75	595	3.40	34.86	600	3.40	34.86	27.76
793	3.33	34.86	800	3.35	34.86	27.76	792	3.38	34.87	800	3.40	34.87	27.77
993	3.40	34.86	1,000	3.40	34.86	27.76	991	3.36		1,000	3.35	34.88	27.77
1,498	3.30	34.86					1,489	3.30	34.915				
Station 5946; June 10; latitude 50°00' N., longitude 49°00' W.; depth 1,866 m.; dynamic height 970.857.													
0	6.63	34.34	0	6.63	34.34	26.96	0	5.94	33.99	0	5.94	33.99	26.78
25	6.00	34.40	25	6.00	34.40	27.10	25	4.24	34.13	25	4.24	34.13	27.09
50	3.67	34.33	50	3.67	34.33	27.31	50	1.84	34.27	50	1.84	34.27	27.42
75	2.98	34.55	75	2.98	34.55	27.55	74	2.49	34.47	75	2.50	34.47	27.53
101	4.02	34.75	100	3.95	34.75	27.61	99	2.54	34.55	100	2.55	34.55	27.59
151	4.04	34.84	150	4.05	34.84	27.67	149	2.94	34.67	150	2.90	34.67	27.66
201	4.17	34.89	200	4.15	34.89	27.70	198	2.99	34.72	200	2.95	34.72	27.69
302	3.64	34.85	300	3.65	34.85	27.72	297	3.29	34.78	300	3.30	34.78	27.70
396	3.38	34.85	400	3.40	34.85	27.75	398	3.45	34.85	400	3.45	34.85	27.74
591	3.37	34.85	600	3.35	34.85	27.75	599	3.46	34.86	600	3.45	34.86	27.75
784	3.28	34.86	800	3.30	34.86	27.77	802	3.47	34.86	800	3.45	34.86	27.75
982	3.35	34.89	1,000	3.35	34.89	27.78	1,000	3.38	34.87	1,000	3.40	34.87	27.77
1,482	3.29	34.89					1,492	3.31	34.91				
Station 5947; June 10; latitude 49°50.5' N., longitude 48°22' W.; depth 2,286 m.; dynamic height 970.865.													
0	7.57	34.40	0	7.57	34.40	26.88	0	7.21	34.33	0	7.21	34.33	26.88
25	6.65	34.40	25	6.65	34.40	27.02	25	6.76	34.40	25	6.76	34.40	27.00
49	4.65	34.46	50	4.60	34.46	27.31	49	6.12	34.51	50	6.12	34.51	27.18
74	2.88	34.46	75	2.90	34.46	27.49	75	4.47	34.47	75	4.47	34.47	27.34
98	4.38	34.74	100	4.40	34.75	27.56	98	3.08	34.47	100	3.08	34.47	27.48
148	4.34	34.82	150	4.25	34.82	27.64	148	2.85	34.63	150	2.85	34.63	27.62
197	3.16	34.69	200	3.15	34.69	27.64	199	3.26	34.74	200	3.25	34.74	27.67
295	3.95	34.89	300	3.90	34.89	27.73	299	3.71	34.85	300	3.70	34.85	27.72
390	3.41	34.85	400	3.40	34.85	27.75	403	3.38	34.81	400	3.40	34.81	27.72
575	3.40	34.85	600	3.40	34.85	27.75	592	3.34	34.85	600	3.35	34.85	27.75
752	3.40	34.89	800	3.40	34.89	27.78	789	3.29	34.87	800	3.30	34.865	27.77
947	3.38	34.895	1,000	3.35	34.90	27.79	987	3.36	34.87	1,000	3.35	34.87	27.77
1,447	3.29	34.905					1,487	3.29	34.89				
Station 5948; June 10; latitude 49°40' N., longitude 47°48' W.; depth 2,561 m.; dynamic height 970.881.													
0	7.21	34.33	0	7.21	34.33	26.88	0	6.25	34.03	0	6.25	34.03	26.77
25	6.76	34.40	25	6.76	34.40	27.00	25	5.22	34.32	25	5.22	34.32	27.14
50	6.12	34.51	50	6.12	34.51	27.18	50	2.99	34.41	50	2.99	34.41	27.44
75	4.47	34.47	75	4.47	34.47	27.34	76	2.64	34.49	75	2.64	34.49	27.53
100	3.08	34.47	100	3.08	34.47	27.48	101	2.53	34.54	100	2.55	34.54	27.58
150	2.85	34.63	150	2.85	34.63	27.62	151	3.13	34.71	150	3.05	34.71	27.67
199	3.26	34.74	200	3.25	34.74	27.67	202	3.10	34.75	200	3.10	34.75	27.70
299	3.71	34.85	300	3.70	34.85	27.72	303	3.27	34.83	300	3.25	34.83	27.74
403	3.38	34.81	400	3.40	34.81	27.72	397	3.36	34.84	400	3.35	34.85	27.75
592	3.34	34.85	600	3.35	34.85	27.75	595	3.40	34.86	600	3.40	34.86	27.76
789	3.29	34.87	800	3.30	34.865	27.77	792	3.38	34.87	800	3.40	34.87	27.77
987	3.36	34.87	1,000	3.35	34.87	27.77	991	3.36		1,000	3.35	34.88	27.77
1,487	3.29	34.89					1,489	3.30	34.915				
Station 5949; June 10; latitude 49°15' N., longitude 48°02' W.; depth 2,378 m.; dynamic height 970.851.													
0	6.25	34.03	0	6.25	34.03	26.77	0	5.94	33.99	0	5.94	33.99	26.78
25	5.22	34.32	25	5.22	34.32	27.14	25	4.24	34.13	25	4.24	34.13	27.09
50	2.99	34.41	50	2.99	34.41	27.44	50	1.84	34.27	50	1.84	34.27	27.42
76	2.64	34.49	75	2.64	34.49	27.53	74	2.49	34.47	75	2.50	34.47	27.53
101	2.53	34.54	100	2.55	34.54	27.58	99	2.54	34.55	100	2.55	34.55	27.59
151	3.13	34.71	150	3.05	34.71	27.67	149	2.94	34.67	150	2.90	34.67	27.66
202	3.10	34.75	200	3.10	34.75	27.70	198	2.99	34.72	200	2.95	34.72	27.69
303	3.27	34.83	300	3.25	34.83	27.74	297	3.29	34.78	300	3.30	34.78	27.70
397	3.36	34.84	400	3.35	34.85	27.75	398	3.45	34.85	400	3.45	34.85	27.74
595	3.40	34.86	600	3.40	34.86	27.76	599	3.46	34.86	600	3.45	34.86	27.75
792	3.38	34.87	800	3.40	34.87	27.77	802	3.47	34.86	800	3.45	34.86	27.75
991	3.36		1,000	3.35	34.88	27.77	1,000	3.38	34.87	1,000	3.40	34.87	27.77
1,489	3.30	34.915					1,492	3.31	34.91				
Station 5950; June 10; latitude 48°52.5' N., longitude 48°13' W.; depth 2,232 m.; dynamic height 970.865.													
0	5.94	33.99	0	5.94	33.99	26.78	0	5.94	33				

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5951; June 10; latitude 48°31.5' N., longitude 48°25' W.; depth 1,829 m.; dynamic height 970.880.							Station 5956; June 11; latitude 47°45.5' N., longitude 48°37' W.; depth 222 m.; dynamic height 971.061.						
0	4.49	33.43	0	4.49	33.43	26.50	0	2.90	32.77	0	2.90	32.77	26.14
25	1.45	34.02	25	1.45	34.02	27.25	25	1.39	32.99	25	1.39	32.99	26.43
49	1.13	34.19	50	1.15	34.19	27.40	50	-0.35	33.05	50	-0.35	33.05	26.56
74	1.75	34.31	75	1.75	34.31	27.46	75	0.04	33.15	75	0.04	33.15	26.64
98	2.05	34.43	100	2.10	34.44	27.53	100	-1.09	33.17	100	-1.09	33.17	26.69
147	2.57	34.56	150	2.55	34.56	27.60	150	-0.52	33.39	150	-0.52	33.39	26.85
196	2.79	34.62	200	2.80	24.63	27.62	200	0.25	33.75	200	0.25	33.75	27.11
294	3.32	34.77	300	3.30	34.77	27.70							
392	3.27	34.79	400	3.30	34.79	27.71							
588	3.49	34.86	600	3.50	34.86	27.75							
785	3.55	34.88	800	3.55	34.88	27.75							
984	3.46	34.87	1,000	3.45	34.88	27.76							
1,485	3.32	34.88											
Station 5952; June 11; latitude 48°11' N., longitude 48°36' W.; depth 602 m.; dynamic height 970.959.							Station 5957; June 11; latitude 47°48.5' N., longitude 48°14' W.; depth 278 m.; dynamic height 971.045.						
0	4.34	32.92	0	4.34	32.92	26.12	0	3.35	32.64	0	3.35	32.64	26.00
25	1.50	33.44	25	1.50	33.44	26.78	25	1.82	32.89	25	1.82	32.89	26.31
50	-0.09	33.62	50	-0.09	33.62	27.02	51	0.14	33.16	50	0.25	33.16	26.63
76	0.37	33.82	75	0.35	33.81	27.15	76	-0.65	33.17	75	-0.65	33.17	26.68
101	0.57	33.91	100	0.55	33.91	27.22	101	-0.72	33.27	100	-0.70	33.26	26.75
151	1.75	34.21	150	1.65	34.21	27.39	152	-0.98	33.66	150	-0.05	33.64	27.03
202	2.05	34.39	200	2.05	34.39	27.50	202	0.84	33.96	200	0.80	33.94	27.22
303	2.76	34.61	300	2.70	34.61	27.62	253	1.76	34.27				
404	3.30	34.75	400	3.30	34.75	27.68							
569	3.60	34.83	(600)	3.60	34.83	27.71							
Station 5953; June 11; latitude 48°05' N., longitude 48°40' W.; depth 326 m.; dynamic height 970.980.							Station 5958; June 11; latitude 47°51' N., longitude 47°54' W.; depth 315 m.; dynamic height 971.000.						
0	4.31	33.11	0	4.31	33.11	26.27	0	3.29	32.83	0	3.29	32.83	26.15
25	1.89	33.23	25	1.89	33.23	26.59	23	2.34	32.96	25	2.20	32.99	26.37
51	0.09	33.51	50	0.10	33.50	26.91	46	0.60	33.23	50	0.45	33.27	26.71
76	-0.20	33.65	75	-0.20	33.65	27.05	69	-0.05	33.44	75	-0.10	33.49	26.91
101	0.35	33.81	100	0.30	33.80	27.14	93	-0.20	33.63	100	-0.15	33.68	27.07
152	1.37	34.12	150	1.30	34.11	27.33	139	0.60	33.91	150	0.80	33.96	27.24
203	1.78	34.33	200	1.75	34.32	27.47	185	1.33	34.12	200	1.55	34.18	27.36
304	2.50	34.51	300	2.45	34.51	27.56	278	2.60	34.53	(300)	2.90	34.63	27.62
Station 5954; June 11; latitude 47°51.5' N., longitude 48°48' W.; depth 224 m.; dynamic height 971.072.							Station 5959; June 11; latitude 47°59' N., longitude 47°43' W.; depth 373 m.; dynamic height 970.954.						
0	2.89	32.76	0	2.89	32.76	26.13	0	4.38	32.87	0	4.38	32.87	26.08
26	1.18	32.82	25	2.05	32.82	26.25	25	2.39	33.23	25	2.39	33.23	26.55
51	-0.96	33.03	50	-0.95	33.02	26.57	51	0.64	33.68	50	0.65	33.67	27.02
76	-1.18	33.09	75	-1.20	33.09	26.63	76	0.68	33.92	75	0.65	33.91	27.21
102	-1.15	33.15	100	-1.20	33.14	26.67	102	1.67	34.13	100	1.60	34.12	27.32
153	-0.71	33.32	150	-0.80	33.30	26.78	152	1.78	34.26	150	1.70	34.25	27.41
204	0.51	33.85	200	0.40	33.82	27.16	203	2.04	34.42	200	2.00	34.41	27.52
							305	2.95	34.66	300	2.90	34.65	27.64
							353	3.29	34.75				
Station 5960; June 11; latitude 48°17' N., longitude 47°22' W.; depth 1,811 m.; dynamic height 970.915.							Station 5965; June 11; latitude 47°44' N., longitude 48°53' W.; depth 196 m.; dynamic height 971.073.						
0	4.76	33.25	0	4.76	33.25	26.34	0	2.77	32.79	0	2.77	32.79	26.17
25	3.38	33.37	25	3.38	33.37	26.57	26	2.78	32.83	25	2.80	32.83	26.20
50	2.08	33.95	50	2.08	33.95	27.14	51	-0.69	32.99	50	-0.60	32.99	26.53
75	2.59	34.39	75	2.59	34.39	27.45	77	-0.90	33.07	75	-0.95	33.06	26.60
100	2.30	34.42	100	2.30	34.42	27.51	103	-1.02	33.16	100	-1.00	33.15	26.68
150	2.61	34.51	150	2.61	34.51	27.55	154	-0.73	33.33	150	-0.80	33.31	26.79
199	3.26	34.70	200	3.20	34.70	27.65							
299	3.18	34.76	300	3.20	34.76	27.70							
403	3.32	34.78	400	3.30	34.78	27.70							
602	3.45	34.83	600	3.45	34.83	27.72							
801	3.54	34.85	800	3.55	34.85	27.73							
1,001	3.47	34.88	1,000	3.45	34.88	27.76							
1,503	3.31	34.87											

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5961; June 11; latitude 48°36.5' N., longitude 47°01' W.; depth 2,743 m.; dynamic height 970.889.							Station 5965; June 12; latitude 48°57.5' N., longitude 45°05' W.; depth 1,500 m.; dynamic height 970.866.						
0	7.36	34.30	0	7.36	34.30	26.84	0	7.03	34.31	0	7.03	34.31	26.90
25	6.32	34.36	25	6.32	34.36	27.03	25	5.95	34.41	25	5.95	34.41	27.12
50	4.60	34.43	50	4.60	34.43	27.28	50	4.83	34.41	50	4.83	34.41	27.25
76	4.12	34.45	75	4.10	34.45	27.36	75	3.39	34.47	75	3.39	34.47	27.45
101	3.50	34.52	100	3.50	34.52	27.48	100	3.23	34.59	100	3.23	34.59	27.55
151	3.25	34.64	150	3.25	34.64	27.59	150	3.39	34.75	150	3.39	34.75	27.67
202	3.66	34.78	200	3.60	34.78	27.67	201	3.20	34.78	200	3.15	34.78	27.71
303	3.60	34.84	300	3.60	34.84	27.72	301	3.31	34.805	300	3.30	34.80	27.72
379	*3.50	34.82	400	3.50	34.82	27.72	389	3.44	34.82	400	3.50	34.82	27.72
569	3.58	34.84	600	3.60	34.84	27.72	584	3.52	34.85	600	3.50	34.85	27.74
759	3.51	34.86	800	3.50	34.86	27.75	780	3.41	34.87	800	3.40	34.87	27.77
954	3.39	34.875	1,000	3.40	34.88	27.77	977	3.31	34.88	1,000	3.30	34.88	27.78
1,449	3.31	34.90					1,424	3.23	34.89				
Station 5962; June 11; latitude 48°59' N., longitude 46°38' W.; depth 2,784 m.; dynamic height 970.875.							Station 5966; June 12; latitude 48°39' N., longitude 45°27' W.; depth 1,152 m.; dynamic height 970.875.						
0	7.32	34.26	0	7.32	34.26	26.82	0	7.34	34.10	0	7.34	34.10	26.68
25	5.97	34.33	25	5.97	34.33	27.05	24	5.54	34.22	25	5.50	34.22	27.02
49	5.01	34.31	50	4.95	34.31	27.16	48	4.28	34.29	50	4.20	34.30	27.23
74	2.94	34.37	75	2.90	34.37	27.42	73	3.37	34.41	75	3.35	34.43	27.41
99	2.50	34.45	100	2.50	34.45	27.51	97	3.97	34.64	100	3.95	34.65	27.53
148	2.58	34.57	150	2.60	34.57	27.60	145	4.00	34.77	150	4.00	34.77	27.63
197	3.02	34.68	200	3.00	34.68	27.65	193	3.86	34.79	200	3.80	34.79	27.66
296	3.22	34.78	300	3.25	34.78	27.70	290	3.78	34.84	300	3.75	34.84	27.70
381	3.34	34.79	400	3.40	34.82	27.73	377	3.51	34.845	400	3.50	34.85	27.74
575	3.42	34.87	600	3.45	34.87	27.76	570	3.41	34.85	600	3.40	34.85	27.75
772	3.43	34.875	800	3.40	34.88	27.77	766	3.38	34.88	800	3.35	34.88	27.77
971	3.36	34.88	1,000	3.35	34.88	27.77	968	3.30	34.88	1,000	3.30	34.88	27.78
Station 5963; June 12; latitude 49°16' N., longitude 46°18' W.; depth 3,017 m.; dynamic height 970.905.							Station 5967; June 12; latitude 48°17.5' N., longitude 45°54' W.; depth 1,115 m.; dynamic height 970.901.						
0	8.42	34.33	0	8.42	34.33	26.70	0	3.95	32.95	0	3.95	32.95	26.18
25	7.35	34.39	25	7.35	34.39	26.91	24	2.58	33.60	25	2.50	33.63	26.85
50	6.03	34.39	50	6.03	34.39	27.08	48	1.94	34.11	50	1.90	34.11	27.29
75	4.66	34.44	75	4.66	34.44	27.29	73	1.72	34.15	75	1.70	34.16	27.34
100	4.04	34.45	100	4.04	34.45	27.36	97	2.09	34.32	100	2.15	34.34	27.45
150	4.04	34.65	150	4.04	34.65	27.52	145	2.61	34.51	150	2.65	34.53	27.56
200	4.87	34.95	200	4.87	34.95	27.68	194	3.15	34.71	200	3.10	34.72	27.68
300	4.21	34.89	300	4.21	34.89	27.70	291	3.22	34.77	300	3.25	34.78	27.70
408	4.35	34.95	400	4.40	34.95	27.72	355	3.33	34.79	400	3.40	34.80	27.71
611	3.92	34.92	600	3.95	34.92	27.75	540	3.46	34.82	600	3.45	34.83	27.72
813	3.69	34.91	800	3.70	34.905	27.76	729	3.52	34.86	800	3.50	34.87	27.76
1,018	3.43	34.88	1,000	3.45	34.88	27.76	923	3.41	34.89	(1,000)	3.35	34.89	27.78
1,534	3.32	34.91											
Station 5964; June 12; latitude 49°07' N., longitude 45°42' W.; depth 2,743 m.; dynamic height 970.890.							Station 5968; June 12; latitude 47°59' N., longitude 46°20' W.; depth 1,188 m.; dynamic height 970.957.						
0	5.59	33.58	0	5.59	33.58	26.50	0	4.24	32.99	0	4.24	32.99	26.18
25	4.89	34.16	25	5.89	34.16	27.04	26	3.65	33.43	25	3.65	33.41	26.58
51	4.28	34.36	50	4.30	34.36	27.27	51	1.01	33.79	50	1.15	33.78	27.07
76	3.83	34.41	75	3.85	34.41	27.36	77	0.77	33.89	75	0.80	33.88	27.17
102	3.29	34.48	100	3.30	34.47	27.46	102	1.18	34.01	100	1.15	33.99	27.24
152	3.67	34.69	150	3.65	34.68	27.58	154	1.73	34.17	150	1.70	34.15	27.33
203	4.35	34.85	200	4.30	34.85	27.66	205	2.21	34.35	200	2.10	34.33	27.44
305	3.60	34.82	300	3.60	34.82	27.71	307	3.82	34.81	300	3.75	34.80	27.67
391	3.89	34.88	400	3.95	34.89	27.72	360	3.73	34.83	400	3.70	34.83	27.70
590	3.67	34.89	600	3.65	34.89	27.75	549	3.48	34.84	600	3.45	34.84	27.73
790	3.51	34.87	800	3.50	34.87	27.76	745	3.46		800	3.45	34.86	27.75
989	3.38	34.89	1,000	3.40	34.89	27.78	952	3.31	34.87	(1,000)	3.25	34.87	27.78
1,488	3.33	34.91											

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Sealed values				Observed values			Sealed values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5969; June 12; latitude 47°54' N., longitude 46°11' W.; depth 1,007 m.; dynamic height 970.904.							Station 5974; June 13; latitude 47°18.5' N., longitude 45°23' W.; depth 233 m.; dynamic height 970.905.						
0	4.68	33.27	0	4.68	33.27	26.36	0	6.82	33.97	0	6.82	33.97	26.66
25	5.68	34.06	25	5.68	34.06	26.88	23	6.12	34.06	25	6.05	34.06	26.83
50	4.52	34.14	50	4.52	34.14	27.07	47	5.17	34.09	50	5.05	34.09	26.97
76	3.57	34.22	75	3.60	34.22	27.23	70	4.41	34.15	75	4.30	34.16	27.11
101	3.08	34.31	100	3.10	34.30	27.34	94	3.86	34.19	100	3.85	34.22	27.21
151	3.30	34.61	150	3.30	34.61	27.57	140	3.89	34.55	150	3.85	34.62	27.52
201	3.80	34.79	200	3.75	34.78	27.65	187	4.00	34.78	200	4.05	34.81	27.65
302	3.70	34.84	300	3.75	34.84	27.70	Station 5975; June 13; latitude 47°17' N., longitude 54°41' W.; depth 241 m.; dynamic height 970.903.						
326	3.70	34.84	400	3.60	34.84	27.72	0	6.88	34.01	0	6.88	34.01	26.68
507	3.50	34.83	600	3.45	34.85	27.74	25	5.65	34.04	25	5.65	34.04	26.86
699	3.45	34.88	800	3.40	34.88	27.77	50	4.75	34.08	50	4.75	34.08	26.99
861	3.35	34.88	(1,000)	3.25	34.88	27.78	75	4.03	34.11	75	4.03	34.11	27.10
Station 5970; June 12; latitude 47°46' N., longitude 45°54' W.; depth 405 m.; dynamic height 970.903.							100	3.23	34.18	100	3.23	34.18	27.22
0	6.58	33.89	0	6.58	33.89	26.62	151	3.79	34.58	150	3.80	34.57	27.49
23	5.82	34.00	25	5.75	34.01	26.82	201	3.99	34.81	200	3.95	34.81	27.66
47	4.96	34.07	50	4.85	34.08	26.98	231	3.95	34.83				
70	4.28	34.12	75	4.10	34.13	27.10	Station 5976; June 13; latitude 47°17.5' N., longitude 46°00' W.; depth 324 m.; dynamic height 970.910.						
93	3.51	34.20	100	3.45	34.23	27.24	0	6.82	33.93	0	6.82	33.93	26.62
140	3.34	34.46	150	3.40	34.53	27.49	23	6.22	33.98	25	6.10	33.98	26.76
186	3.77	34.79	200	3.75	34.80	27.67	46	4.99	34.05	50	4.85	34.06	26.97
280	3.72	34.83	300	3.65	34.84	27.71	69	4.31	34.08	75	4.10	34.11	27.09
373	3.60	34.86	(400)	3.60	34.86	27.74	92	3.60	34.19	100	3.65	34.23	27.23
Station 5971; June 12; latitude 47°41.5' N., longitude 45°47' W.; depth 320 m.; dynamic height 970.919.							137	3.92	34.45	150	3.95	34.54	27.44
0	6.88	33.91	0	6.88	33.91	26.59	184	4.05	34.76	200	4.00	34.78	27.63
24	5.96	34.02	25	5.90	34.02	26.81	276	3.71	34.85	(300)	3.65	34.86	27.73
49	5.02	34.08	50	5.00	34.08	26.96	Station 5977; June 13; latitude 47°17.5' N., longitude 46°32' W.; depth 652 m.; dynamic height 970.892.						
73	4.29	34.13	75	4.20	34.13	27.09	0	6.62	33.89	0	6.62	33.89	26.62
98	3.71	34.19	100	3.70	34.20	27.20	26	5.12	34.01	25	5.15	34.01	26.90
147	3.69	34.45	150	3.70	34.47	27.42	53	4.00	34.15	50	4.15	34.13	27.10
195	4.03	34.73	200	4.05	34.73	27.58	79	3.29	34.31	75	3.35	34.28	27.29
293	3.75	34.75	300	3.70	34.75	27.64	105	3.08	34.41	100	3.10	34.39	27.41
Station 5972; June 13; latitude 47°27' N., longitude 45°15' W.; depth 233 m.; dynamic height 970.906.							157	3.95	34.73	150	3.90	34.69	27.57
0	6.69	33.98	0	6.69	33.98	26.68	209	3.83	34.81	200	3.85	34.80	27.66
25	5.67	34.08	25	5.67	34.08	26.89	314	3.58	34.81	300	3.60	34.81	27.70
50	4.76	34.10	50	4.76	34.10	27.01	415	3.48	34.82	400	3.55	34.82	27.71
76	4.05	34.14	75	4.05	34.14	27.12	623	3.41	34.88	600	3.40	34.88	27.77
101	3.75	34.27	100	3.75	34.26	27.25	Station 5978; June 13; latitude 47°15.5' N., longitude 46°56' W.; depth 1,162 m.; dynamic height 970.890.						
151	4.09	34.67	150	4.10	34.66	27.53	0	6.59	34.05	0	6.59	34.05	26.74
202	3.99	34.75	200	4.00	34.75	27.61	25	5.35	34.20	25	5.35	34.20	27.03
Station 5973; June 13; latitude 47°21' N., longitude 45°03' W.; depth 181 m.; dynamic height 970.908.							49	4.38	34.33	50	4.35	34.33	27.23
0	6.87	33.94	0	6.87	33.94	26.62	74	3.07	34.40	75	3.05	34.40	27.42
25	6.74	33.96	25	6.74	33.96	26.66	98	2.99	34.46	100	3.00	34.46	27.48
50	4.96	34.07	50	4.96	34.07	26.97	148	3.24	34.69	150	3.25	34.69	27.63
75	3.92	34.18	75	3.92	34.18	27.16	197	3.34	34.75	200	3.35	34.75	27.67
100	3.75	34.28	100	3.75	34.28	27.26	295	3.63	34.77	300	3.60	34.77	27.67
150	4.09	34.66	150	4.09	34.66	27.53	382	3.56	34.79	400	3.60	34.79	27.68
							575	3.59	34.87	600	3.60	34.87	27.75
							769	3.50	34.87	800	3.45	34.87	27.76
							965	3.27	34.87	1,000	3.25	34.87	27.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5979; June 13; latitude 47°13' N., longitude 47°21' W.; depth 313 m.; dynamic height 970.887.								Station 5985; July 11; latitude 49°48' N., longitude 49°27' W.; depth 1,408 m.; dynamic height 970.885.							
0	4.55	33.15		0	4.55	33.15	26.28	0	7.50	32.52		0	7.50	32.52	25.42
25	6.32	34.31		25	6.32	34.31	26.99	27	3.39	33.90		25	3.60	33.82	26.91
50	5.23	34.42		50	5.23	34.42	27.21	53	2.72	34.42		50	2.75	34.39	27.44
76	1.97	34.17		75	1.95	34.17	27.34	79	2.95	34.61		75	2.90	34.59	27.59
101	3.24	34.42		100	3.25	34.42	27.42	105	2.73	34.62		100	2.75	34.62	27.63
151	2.39	34.19		150	2.40	34.47	27.54	159	3.10	34.72		150	3.00	34.70	27.67
201	3.46	34.71		200	3.45	34.71	27.63	211	3.46	34.80		200	3.40	34.79	27.70
292	3.52	34.84		(300)	3.50	34.85	27.54	316	3.09	34.74		300	3.10	34.75	27.70
Station 5980; June 13; latitude 47°11' N., longitude 47°35' W.; depth 224 m.; dynamic height 970.943.								407	3.16			400	3.20	34.76	27.70
0	3.49	32.94		0	3.49	32.94	26.22	612	3.20	34.83		600	3.20	34.83	27.75
24	2.62	33.03		25	2.50	33.04	26.39	820	3.25	34.83		800	3.25	34.83	27.74
49	-0.18	33.33		50	-0.15	33.34	26.80	1,030	3.30	34.85		1,000	3.30	34.85	27.76
73	-0.01	33.56		75	0.00	33.57	26.99	1,328	3.35	34.86					
98	0.44	33.81		100	0.50	33.83	27.15	Station 5986; July 11; latitude 49°36.5' N., longitude 50°01' W.; depth 653 m.; dynamic height 970.933.							
146	2.62	34.27		150	2.60	34.29	27.37	0	6.72	32.41		0	6.72	32.41	25.47
195	2.46	34.47		200	2.45	34.49	27.54	25	1.04	33.10		25	1.01	33.10	26.54
Station 5981; June 13; latitude 47°10' N., longitude 48°03' W.; depth 169 m.; dynamic height 970.989.								50	-0.97	33.58		50	-0.97	33.58	27.02
0	3.70	32.67		0	3.70	32.67	25.99	75	0.16	33.94		75	0.10	33.94	27.27
25	2.36	32.92		25	2.36	32.92	26.31	100	1.06	34.18		100	1.06	34.18	27.40
51	0.72	33.18		50	0.75	33.17	26.61	150	2.06	34.40		150	2.06	34.40	27.51
76	-0.60	33.20		75	-0.60	33.20	26.70	201	2.23	34.52		200	2.20	34.52	27.60
101	-0.60	33.33		100	-0.60	33.32	26.79	301	3.32	34.76		300	3.30	34.76	27.69
152	0.56	33.79		150	0.50	33.77	27.11	389	3.04	34.74		400	3.10	34.74	27.69
Station 5982; June 13; latitude 47°10' N., longitude 48°39' W.; depth 123 m.; dynamic height 970.991.								588	3.10	34.78		600	3.10	34.78	27.72
0	3.70	32.77		0	3.70	32.77	26.07	Station 5987; July 11; latitude 49°27.5' N., longitude 50°26' W.; depth 335 m.; dynamic height 971.045.							
26	2.00	32.89		25	2.05	32.89	26.30	0	8.24	32.71		0	8.24	32.71	25.46
51	0.93	32.97		50	1.00	32.97	26.44	24	-0.41	32.84		25	-0.50	32.84	26.41
77	-0.12	33.03		75	-0.10	33.02	26.53	48	-1.49	33.02		50	-1.55	33.03	26.59
103	-0.25	33.49		100	-0.25	33.44	26.88	72	-1.52	33.09		75	-1.50	33.09	26.63
Station 5983; June 14; latitude 47°10' N., longitude 49°07' W.; depth 95 m.; dynamic height 970.988.								95	-1.33	33.14		100	-1.30	33.16	26.69
0	3.52	32.79		0	3.52	32.79	26.09	143	-0.89	33.51		150	-0.75	33.56	27.00
25	2.05	32.87		25	2.05	32.87	26.29	191	0.10	33.82		200	0.30	33.87	27.20
50	1.22	32.95		50	1.22	32.95	26.40	286	1.92	34.37		(300)	2.20	34.46	27.55
75	-0.27	33.17		75	-0.27	33.17	26.66	Station 5988; July 11; latitude 49°18.5' N., longitude 50°54' W.; depth 342 m.; dynamic height 971.011.							
Station 5984; July 11; latitude 49°58' N., longitude 49°02' W.; depth 1,829 m.; dynamic height, 970.870.								0	8.38	32.88		0	8.38	32.88	25.57
0	8.21	33.62		0	8.21	33.62	26.19	25	4.07	33.04		25	4.07	33.04	26.24
23	7.17	34.36		25	6.80	34.37	26.97	50	-0.88	33.11		50	-0.88	33.11	26.63
45	3.87	34.48		50	3.65	34.51	27.45	75	-1.28	33.32		75	-1.28	33.32	26.82
68	3.24	34.60		75	3.35	34.63	27.57	101	-0.86	33.52		100	-0.90	33.51	26.97
91	3.61	34.70		100	3.60	34.71	27.62	151	0.26	33.88		150	0.25	33.87	27.21
136	3.39	34.73		150	3.35	34.73	27.65	201	1.22	34.14		200	1.20	34.14	27.36
181	3.26	34.73		200	3.30	34.75	27.68	302	2.54	34.54		300	2.50	34.53	27.57
272	3.53	34.80		300	3.50	34.82	27.72	Station 5989; July 12; latitude 49°09' N., longitude 51°23' W.; depth 243 m.; dynamic height 971.059.							
286	3.47	34.85		400	3.25	34.81	27.73	0	9.26	31.90		0	9.26	31.90	24.68
439	3.16	34.81		600	3.20	34.82	27.75	25	1.08	32.97		25	1.08	32.97	26.44
598	3.18	34.82		800	3.20	34.83	27.75	50	-1.47	33.06		50	-1.47	33.06	26.61
767	3.21	34.83		1,000	3.25	34.85	27.76	76	-1.56	33.12		75	-1.60	33.11	26.66
1,220	3.28	34.86						101	-1.51	33.18		100	-1.50	33.17	26.70
								151	-0.75	33.55		150	-0.75	33.54	26.98
								202	0.19	33.88		200	0.15	33.86	27.20
								303	1.87	34.37		300	1.85	34.35	27.48

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 5990; July 12; latitude 49°02' N., longitude 51°44' W.; depth 315 m.; dynamic height 971.080.													
0	7.09	32.14	0	7.09	32.14	25.18	0	10.13	30.43	0	10.13	30.43	23.38
25	-0.42	32.86	25	-0.42	32.86	26.42	25	-0.70	32.89	25	-0.45	32.86	26.42
51	-1.35	32.97	50	-1.35	32.96	26.53	51	-1.28	33.00	50	-1.30	32.99	26.55
76	-1.43	33.04	75	-1.40	33.04	26.60	77	-1.28	33.03	75	-1.30	33.03	26.58
101	-1.58	33.10	100	-1.60	33.10	26.65	103	-1.38	33.09	100	-1.35	33.07	26.62
152	-1.37	33.24	150	-1.40	33.23	26.75	154	-1.36	33.09	150	-1.35	33.08	26.63
202	-0.47	33.64	200	-0.50	33.62	27.04							
283	1.42	34.22	(300)	1.85	34.34	27.47							
Station 5991; July 12; latitude 48°57' N., longitude 51°59' W.; depth 333 m.; dynamic height 971.082.													
0	7.66	32.30	0	7.66	32.30	25.23	0	9.88	32.68	0	9.88	32.68	25.19
25	-0.78	32.90	25	-0.78	32.90	26.46	25	1.15	32.80	25	1.15	32.80	26.30
50	-1.63	33.02	50	-1.63	33.02	26.59	50	-1.31	33.03	50	-1.31	33.03	26.58
75	-1.62	33.07	75	-1.62	33.07	26.63	74	-1.25	33.09	75	-1.25	33.09	26.63
100	-1.66	33.08	100	-1.66	33.08	26.63	99	-1.32	33.13	100	-1.35	33.13	26.67
150	-1.36	33.23	150	-1.36	33.23	26.75	149	-1.47	33.15	150	-1.45	33.14	26.68
200	-0.59	33.59	200	-0.59	33.59	27.01	198	-0.97	33.34	(200)	-0.95	33.35	26.84
300	1.51	34.26	300	1.51	34.26	27.44							
Station 5992; July 12; latitude 48°52.5' N., longitude 52°21' W.; depth 362 m.; dynamic height 971.108.													
0	8.99	31.82	0	8.99	31.82	24.65	0	9.74	31.19	0	9.74	31.19	24.05
25	-1.12	32.90	25	-1.12	32.90	26.47	25	3.34	32.47	25	3.34	32.47	25.86
50	-1.44	33.03	50	-1.44	33.03	26.59	50	-1.14	33.05	50	-1.14	33.05	26.60
75	-1.41	33.08	75	-1.41	33.08	26.63	75	-1.35	33.10	75	-1.35	33.10	26.64
99	-1.45	33.14	100	-1.45	33.14	26.68	101	-1.33	33.12	100	-1.30	33.12	26.66
149	-1.43	33.22	150	-1.40	33.22	26.74	151	-1.22	33.23	150	-1.20	33.23	26.74
199	-1.11	33.30	200	-1.10	33.30	26.79							
298	1.23	34.13	300	1.25	34.15	27.37							
Station 5993; July 12; latitude 48°48' N., longitude 52°40' W.; depth 225 m.; dynamic height 971.097.													
0	9.25	31.39	0	9.25	31.39	24.28	0	9.57	31.63	0	9.57	31.63	24.41
25	-0.73	32.88	25	-0.73	32.88	26.45	24	2.67	32.59	25	2.25	32.61	26.07
50	-1.35	33.03	50	-1.35	33.03	26.59	49	-1.12	32.95	50	-1.15	32.96	26.52
75	-1.42	33.04	75	-1.42	33.04	26.60	73	-1.23	33.09	75	-1.25	33.09	26.63
100	-1.45	33.08	100	-1.45	33.08	26.63	97	-1.42	33.12	100	-1.45	33.12	26.66
151	-1.38	33.11	150	-1.40	33.11	26.65	146	-1.31	33.21	150	-1.30	33.22	26.74
201	-0.78	33.42	200	-0.80	33.41	26.88							
Station 5994; July 12; latitude 48°46' N., longitude 52°45' W.; depth 159 m.; dynamic height 971.103.													
0	10.05	30.98	0	10.05	30.98	23.83	0	9.81	32.02	0	9.81	32.02	24.69
25	-1.06	32.90	25	-1.06	32.90	26.47	25	1.01	32.76	25	1.01	32.76	26.27
51	-1.35	33.00	50	-1.35	33.00	26.57	50	-0.88	32.90	50	-0.88	32.90	26.47
76	-1.31	33.06	75	-1.30	33.06	26.61	74	-1.23	32.99	75	-1.25	32.99	26.55
101	-1.35	33.07	100	-1.35	33.07	26.62	99	-1.13	33.10	100	-1.15	33.10	26.64
147	-1.36	33.10	150	-1.35	33.10	26.64	149	-0.76	33.30	150	-0.75	33.30	26.78
							198	-0.47	33.43	200	-0.45	33.43	26.88
Station 5995; July 12; latitude 48°43' N., longitude 52°53' W.; depth 115 m.; dynamic height 971.119.													
0	11.05	30.34	0	11.05	30.34	23.16	0	9.63	32.11	0	9.63	32.11	24.78
27	-0.70	32.77	25	-0.35	32.74	26.32	24	2.94	32.62	25	2.65	32.63	26.05
53	-1.22	32.91	50	-1.20	32.89	26.47	48	0.00	32.90	50	-0.15	32.90	26.44
79	-1.30	32.96	75	-1.30	32.95	26.52	71	-0.86	32.99	75	-0.90	33.01	26.56
103	-1.37	33.05	100	-1.35	33.04	26.60	95	-1.02	33.10	100	-1.05	33.12	26.65
										(150)	-0.85	33.30	26.78

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 6002; July 12; latitude 47°51'N., longitude 50°52'W.; depth 123 m.; dynamic height 971.080.								Station 6008; July 13; latitude 48°10.5'N., longitude 49°47'W.; depth 224 m.; dynamic height 971.054.							
0	9.49	32.14		0	9.49	32.14	24.83	0	8.29	32.26		0	8.29	32.26	25.10
24	3.78	32.75		25	3.25	32.76	26.10	25	2.48	32.84		25	2.48	32.84	26.23
49	-0.12	32.92		50	-0.15	32.93	26.47	50	-0.73	33.12		50	-0.73	33.12	26.64
73	-0.78	33.03		75	-0.85	33.03	26.57	75	-1.07	33.18		75	-1.07	33.18	26.70
97		33.12		(100)	-1.05	33.13	26.66	100	-1.06	33.23		100	-1.06	33.23	26.74
Station 6003; July 13; latitude 47°44'N., longitude 50°34'W.; depth 159 m.; dynamic height 971.064.								Station 6009; July 13; latitude 48°36'N., longitude 49°37'W.; depth 672 m.; dynamic height 970.987.							
0	9.21	32.45		0	9.21	32.45	25.12	0	8.33	32.41		0	8.33	32.41	25.22
22	2.51	32.85		25	1.60	32.87	26.32	24	4.71	33.04		25	4.50	33.05	26.20
44	-0.58	32.99		50	-0.60	33.03	26.56	48	0.76	33.26		50	0.55	33.28	26.71
65		33.17		75	-0.60	33.23	26.72	72	-0.56	33.52		75	-0.55	33.55	26.98
131	-0.62	33.28		100	-0.60	33.29	26.76	96	0.29	33.83		100	0.35	33.86	27.19
	-0.58	33.31		(150)	-0.55	33.32	26.79	145	0.90	34.07		150	0.95	34.10	27.34
Station 6004; July 13; latitude 47°37'N., longitude 50°15'W.; depth 125 m.; dynamic height 971.076.								Station 6010; July 13; latitude 48°39'N., longitude 49°32'W.; depth 1,073 m.; dynamic height 970.961.							
0	7.89	32.54		0	7.89	32.54	25.38	0	7.83	32.88		0	7.83	32.88	25.65
26	5.57	32.75		25	5.70	32.74	25.83	25	4.24	33.20		25	4.24	33.20	26.35
52	-0.30	32.98		50	-0.25	32.96	26.49	50	0.56	33.81		50	0.56	33.81	27.14
78	-0.29	33.20		75	-0.30	33.17	26.66	75	0.43	33.86		75	0.43	33.86	27.18
104	-0.47	33.26		100	-0.45	33.25	26.47	100	0.88	34.07		100	0.88	34.07	27.33
Station 6005; July 13; latitude 47°32'N., longitude 50°02'W.; depth 102 m.; dynamic height 971.078.								Station 6011; July 13; latitude 49°04'N., longitude 49°20'W.; depth 1,646 m.; dynamic height 970.915.							
0	8.24	32.64		0	8.24	32.64	25.41	0	6.81	32.50		0	6.81	32.50	25.49
26	5.77	32.80		25	5.85	32.79	25.85	25	2.92	33.17		25	2.92	33.17	26.46
52	1.25	33.02		50	1.55	33.00	26.43	50	0.03	33.76		50	0.03	33.76	27.13
78	-0.28	33.14		75	-0.15	33.13	26.63	75	0.98	34.12		75	0.98	34.12	27.36
				(100)	-0.50	33.22	26.71	99	3.08	34.50		100	3.05	34.50	27.50
Station 6006; July 13; latitude 47°42.5'N., longitude 49°52'W.; depth 123 m.; dynamic height 971.069.								Station 6007; July 13; latitude 47°55'N., longitude 49°52'W.; depth 178 m.; dynamic height 971.076.							
0	7.92	32.61		0	7.92	32.61	25.44	0	7.90	32.52		0	7.90	32.52	25.36
26	3.46	32.85		25	3.40	32.84	26.15	25	3.14	32.62		25	3.14	32.62	26.00
53	-0.60	32.99		50	-0.80	32.97	26.45	51	-0.37	32.95		50	-0.30	32.93	26.47
79	-0.35	33.14		75	-0.25	33.12	26.62	76	-0.91	33.06		75	-0.90	33.06	26.60
106	-0.64	33.33		100	-0.60	33.29	26.76	101	-1.03	33.16		100	-1.05	33.15	26.68
Station 6007; July 13; latitude 47°55'N., longitude 49°52'W.; depth 178 m.; dynamic height 971.076.								Station 6008; July 13; latitude 48°10.5'N., longitude 49°47'W.; depth 224 m.; dynamic height 971.054.							
0	7.90	32.52		0	7.90	32.52	25.36	0	8.29	32.26		0	8.29	32.26	25.10
25	3.14	32.62		25	3.14	32.62	26.00	25	2.48	32.84		25	2.48	32.84	26.23
51	-0.37	32.95		50	-0.30	32.93	26.47	50	-0.73	33.12		50	-0.73	33.12	26.64
76	-0.91	33.06		75	-0.90	33.06	26.60	75	-1.07	33.18		75	-1.07	33.18	26.70
101	-1.03	33.16		100	-1.05	33.15	26.68	100	-1.06	33.23		100	-1.06	33.23	26.74
152	-0.66	33.42		150	-0.70	33.40	26.87	151	-0.21	33.67		150	-0.20	33.65	27.05
Station 6009; July 13; latitude 48°36'N., longitude 49°37'W.; depth 672 m.; dynamic height 970.987.								Station 6010; July 13; latitude 48°39'N., longitude 49°32'W.; depth 1,073 m.; dynamic height 970.961.							
0	8.33	32.41		0	8.33	32.41	25.22	0	7.83	32.88		0	7.83	32.88	25.65
24	4.71	33.04		25	4.50	33.05	26.20	25	4.24	33.20		25	4.24	33.20	26.35
48	0.76	33.26		50	0.55	33.28	26.71	50	0.56	33.81		50	0.56	33.81	27.14
72	-0.56	33.52		75	-0.55	33.55	26.98	75	0.43	33.86		75	0.43	33.86	27.18
96	0.29	33.83		100	0.35	33.86	27.19	100	0.88	34.07		100	0.88	34.07	27.33
145	0.90	34.07		150	0.95	34.10	27.34	150	1.40	34.21		150	1.40	34.21	27.41
193	1.76	34.31		200	1.85	34.35	27.48	200	2.16	34.42		200	2.16	34.42	27.52
289	3.22	34.70		300	3.30	34.72	27.66	300	3.01	34.61		300	3.01	34.61	27.60
313	3.36	34.74		400	3.50	34.81	27.71	367	3.32	34.76		400	3.40	34.79	27.70
514	3.50	34.85		(600)	3.50	34.85	27.74	563	3.49	34.83		600	3.50	34.84	27.73
Station 6010; July 13; latitude 48°39'N., longitude 49°32'W.; depth 1,073 m.; dynamic height 970.961.								Station 6011; July 13; latitude 49°04'N., longitude 49°20'W.; depth 1,646 m.; dynamic height 970.915.							
0	7.83	32.88		0	7.83	32.88	25.65	0	6.81	32.50		0	6.81	32.50	25.49
25	4.24	33.20		25	4.24	33.20	26.35	25	2.92	33.17		25	2.92	33.17	26.46
50	0.56	33.81		50	0.56	33.81	27.14	50	0.03	33.76		50	0.03	33.76	27.13
75	0.43	33.86		75	0.43	33.86	27.18	75	0.98	34.12		75	0.98	34.12	27.36
100	0.88	34.07		100	0.88	34.07	27.33	99	3.08	34.50		100	3.05	34.50	27.50
150	1.40	34.21		150	1.40	34.21	27.41	199	2.83	34.70		150	2.90	34.63	27.62
200	2.16	34.42		200	2.16	34.42	27.52	298	3.17	34.77		200	2.85	34.70	27.68
300	3.01	34.61		300	3.01	34.61	27.60	422	3.21	34.80		300	3.15	34.77	27.71
367	3.32	34.76		400	3.40	34.79	27.70	623	3.25	34.83		400	3.25	34.80	27.72
563	3.49	34.83		600	3.50	34.84	27.73	820	3.25	34.83		600	3.25	34.83	27.74
766	3.52	34.86		800	3.50	34.86	27.75	1,027	3.33	34.85		800	3.25	34.83	27.74
966	3.33	34.86		1,000	3.35	34.86	27.76	1,545	*3.31	34.87		1,000	3.30	34.85	27.76

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values				Scaled values				Observed values				Scaled values			
Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t	Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰		Depth, meters	Tem- pera- ture, ° C.	Salin- ity, ‰	σ_t
Station 6012; July 13; latitude 49°32' N., longitude 49°11' W.; depth 1,646 m.; dynamic height 970.872.								Station 6017; July 15; latitude 54°06' N., longitude 55°06' W.; depth 169 m.; dynamic height 1454.842.							
0	8.07	32.96		0	8.07	32.96	25.68	0	5.07	31.60		0	5.07	31.60	25.00
24	4.54	34.19		25	4.50	34.22	27.14	25	0.52	32.54		25	0.52	32.54	26.12
49	3.23	34.54		50	3.20	34.54	27.52	50	-1.08	32.94		50	-1.08	32.94	26.51
73	2.97	34.64		75	2.95	34.64	27.62	75	-1.62	33.10		75	-1.62	33.10	26.65
98	2.94	34.70		100	2.95	34.70	27.67	101	-1.59	33.29		100	-1.60	33.28	26.79
145	3.03	34.71		150	3.05	34.71	27.67	151	-0.71	33.64		150	-0.75	33.63	27.05
194	3.09	34.74		200	3.10	34.74	27.69								
292	3.18	34.76		300	3.15	34.76	27.70								
401	3.16	34.81		400	3.15	34.81	27.74								
599	3.21	34.82		600	3.25	34.82	27.74								
796	3.30	34.83		800	3.30	34.83	27.74								
999	3.33	34.84		1,000	3.35	34.84	27.74								
1,513	3.31	34.88													
Station 6013; July 14; latitude 49°57.5' N., longitude 49°06' W.; depth 1,737 m.; dynamic height 970.864.								Station 6018; July 15; latitude 54°13' N., longitude 54°52' W.; depth 187 m.; dynamic height 1454.848.							
0	8.02	33.28		0	8.02	33.28	25.94	0	5.27	31.54		0	5.27	31.54	24.92
24	5.25	34.15		25	5.20	34.18	27.02	24	0.51	32.22		25	0.35	32.25	25.89
48	3.39	34.44		50	3.30	34.45	27.44	48	-1.35	32.94		50	-1.35	32.95	26.52
72	2.82	34.59		75	2.80	34.59	27.59	73	-1.54	33.12		75	-1.55	33.13	26.67
96	2.87	34.65		100	2.90	34.66	27.65	97	-1.52	33.26		100	-1.50	33.28	26.79
143	3.05	34.74		150	3.10	34.75	27.70	145	-1.04	33.54		150	-1.00	33.57	27.02
191	3.42	34.82		200	3.40	34.82	27.73								
287	3.18	34.80		300	3.15	34.80	27.73								
385	3.22	34.80		400	3.20	34.80	27.73								
578	3.18	34.81		600	3.20	34.81	27.74								
771	3.25	34.84		800	3.25	34.84	27.75								
969	3.31	34.86		1,000	3.30	34.86	27.77								
1,475	3.28	34.86													
Station 6014; July 15; latitude 53°43' N., longitude 55°46' W.; depth 126 m.; dynamic height 1454.923.								Station 6019; July 15; latitude 54°29' N., longitude 54°23' W.; depth 224 m.; dynamic height 1454.788.							
0	5.89	27.65		0	5.89	27.65	21.79	0	3.42	32.72		0	3.42	32.72	26.05
26	-0.84	32.21		25	-0.60	32.18	25.88	25	1.17	32.99		25	1.17	32.99	26.45
51	-1.63	32.86		50	-1.60	32.84	26.44	49	-0.78	33.27		50	-0.80	33.28	26.77
77	-1.65	32.94		75	-1.65	32.94	26.52	74	-0.71	33.42		75	-0.70	33.42	26.89
103	-1.66	32.95		100	-1.65	32.95	26.53	98	-0.37	33.58		100	-0.35	33.60	27.01
								147	0.59	34.03		150	0.60	34.03	27.30
								196	0.67	34.05		200	0.70	34.05	27.32
Station 6015; July 15; latitude 53°49' N., longitude 55°31' W.; depth 214 m.; dynamic height 1454.880.								Station 6020; July 15; latitude 54°46' N., longitude 53°50' W.; depth 333 m.; dynamic height 1454.725.							
0	5.05	31.13		0	5.05	31.13	24.63	0	3.84	33.39		0	3.84	33.39	26.54
25	0.12	32.15		25	0.12	32.15	25.82	23	5.15	33.89		25	5.15	33.89	26.80
50	-1.43	32.83		50	-1.43	32.83	26.43	47	3.16	33.88		50	3.00	33.88	27.01
75	-1.47	32.95		75	-1.47	32.95	26.52	70	1.82	34.00		75	1.55	34.00	27.22
99	-1.45	33.04		100	-1.45	33.04	26.60	93	0.49	33.99		100	0.75	34.04	27.31
149	-1.33	33.25		150	-1.35	33.26	26.77	140	2.57	34.38		150	2.55	34.40	27.47
189	-0.96	33.54		(200)	-0.85	33.63	27.05	187	2.28	34.46		200	2.35	34.48	27.54
								280	2.87	34.61		(300)	2.95	34.64	27.62
Station 6016; July 15; latitude 53°53.5' N., longitude 55°25' W.; depth 172 m.; dynamic height 1454.853.								Station 6021; July 15; latitude 54°51' N., longitude 53°35' W.; depth 699 m.; dynamic height 1454.685.							
0	5.49	31.91		0	5.49	31.91	25.20	0	5.62	33.72		0	5.62	33.72	26.62
25	2.16	32.18		25	2.16	32.18	25.72	25	4.43	33.96		25	4.43	33.96	26.94
51	-1.52	32.94		50	-1.50	32.92	26.50	50	0.95	33.99		50	0.95	33.99	27.25
76	-1.60	33.04		75	-1.60	33.03	26.59	76	1.33	34.24		75	1.30	34.24	27.43
101	-1.55	33.18		100	-1.55	33.17	26.71	101	1.73	34.32		100	1.70	34.32	27.47
152	-0.80	33.65		150	-0.85	33.63	27.05	151	2.51	34.52		150	2.50	34.52	27.57
								302	3.38	34.79		200	2.95	34.64	27.62
								318	3.36	34.78		300	3.35	34.78	27.69
								504	3.32	34.80		400	3.35	34.80	27.71
												(600)	3.30	34.81	27.73

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values			σ_t	Observed values			Scaled values			σ_t
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰		Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	
Station 6022; July 15; latitude 54°57' N., longitude 53°22' W.; depth 1,558 m.; dynamic height 1,454.655.							Station 6026; July 16; latitude 55°55' N., longitude 51°38' W.; Depth 3,402 m.; dynamic height 1,454.636.						
0	6.18	34.14	0	6.18	34.14	26.87	0	7.59	34.57	0	7.59	34.57	27.02
26	5.84	34.25	25	5.85	34.25	27.00	25	7.55	34.59	25	7.55	34.59	27.03
51	4.26	34.40	50	4.30	34.39	27.29	50	5.14	34.70	50	5.14	34.70	27.44
77	3.57	34.58	75	3.60	34.56	27.50	75	3.61	34.68	75	3.61	34.68	27.59
102	3.21	34.67	100	3.20	34.66	27.62	100	3.34	34.68	100	3.34	34.68	27.61
153	3.31	34.73	150	3.30	34.73	27.66	150	3.28	34.70	150	3.28	34.70	27.64
204	3.36	34.78	200	3.35	34.78	27.69	200	3.12	34.74	200	3.10	34.74	27.69
306	3.32	34.79	300	3.35	34.79	27.70	300	3.32	34.83	300	3.30	34.82	27.74
399	3.31	34.82	400	3.35	34.82	27.73	399	3.12	34.81	400	3.20	34.81	27.74
595	3.37	34.825	600	3.35	34.825	27.73	595	3.24	34.82	600	3.25	34.82	27.74
788	3.39	34.83	800	3.40	34.83	27.73	788	3.24	34.82	800	3.20	34.81	27.74
988	3.37	34.86	1,000	3.35	34.86	27.76	988	3.22	34.81	1,000	3.20	34.82	27.75
1,480	3.37	34.86	1,500	3.35	34.86	27.76	1,392	3.25	34.86	1,500	3.25	34.86	27.77
Station 6023; July 15-16; latitude 55°01.5' N., longitude 53°09' W.; depth 2,103 m.; dynamic height 1,454.602.						Station 6027; July 17; latitude 56°28.5' N., longitude 50°30' W.; depth 3,566 m.; dynamic height 1,454.648.							
0	6.20	34.39	0	6.20	34.39	27.06	0	7.51	34.52	0	7.51	34.52	26.99
25	5.38	34.54	25	5.38	34.54	27.29	24	7.49	34.52	25	7.45	34.52	27.00
50	3.74	34.70	50	3.74	34.70	27.59	48	5.09	34.63	50	5.05	34.63	27.39
76	3.42	34.74	75	3.40	34.74	27.66	72	4.21	34.59	75	4.15	34.59	27.46
101	3.35	34.76	100	3.35	34.76	27.68	96	3.87	34.64	100	3.85	34.64	27.53
151	3.27	34.75	150	3.30	34.75	27.68	145	3.50	34.65	150	3.45	34.65	27.58
201	3.20	34.79	200	3.20	34.79	27.72	193	3.22	34.67	200	3.20	34.67	27.63
302	3.27	34.82	300	3.25	34.82	27.74	289	3.26	34.77	300	3.25	34.77	27.70
357	3.29	34.84	400	3.30	34.84	27.75	404	3.29	34.83	400	3.30	34.83	27.74
532	3.34	34.84	600	3.35	34.85	27.75	603	3.22	34.81	600	3.20	34.81	27.74
705	3.37	34.86	800	3.40	34.86	27.76	799	3.12	34.815	800	3.10	34.82	27.76
890	3.38	34.865	1,000	3.35	34.87	27.77	994	3.16	34.82	1,000	3.15	34.82	27.75
1,368	3.27	34.885	1,500	3.25	34.89	27.79	1,491	3.19	34.86	1,500	3.20	34.86	27.78
1,802	3.26	34.915	(2,000)	3.25	34.91	27.81	1,990	3.22	34.865	2,000	3.20	34.87	27.79
Station 6024; July 16; latitude 55°11.5' N., longitude 52°51' W.; depth 2,985 m.; dynamic height 1,454.623.						Station 6028; July 17; latitude 57°01.5' N., longitude 49°22' W.; depth 3,612 m.; dynamic height 1,454.617.							
0	7.21	34.24	0	7.21	34.24	26.81	0	7.45	34.62	0	7.45	34.62	27.08
26	5.76	34.38	25	5.80	34.37	27.10	25	7.13	34.62	25	7.13	34.62	27.13
52	3.99	34.68	50	4.10	34.65	27.52	50	5.45	34.66	50	5.45	34.66	27.37
78	3.46	34.77	75	3.50	34.77	27.68	75	3.47	34.62	75	3.47	34.62	27.56
103	3.25	34.77	100	3.25	34.77	27.70	101	3.20	34.76	100	3.20	34.76	27.70
154	3.22	34.77	150	3.25	34.77	27.70	151	3.33	34.80	150	3.35	34.80	27.71
206	3.20	34.76	200	3.20	34.76	27.70	201	3.34	34.82	200	3.35	34.82	27.73
309	3.18	34.81	300	3.20	34.81	27.74	302	3.42	34.84	300	3.40	34.84	27.74
382	3.19	34.83	400	3.20	34.83	27.75	403	3.44	34.85	400	3.45	34.85	27.74
574	3.27	34.84	600	3.25	34.84	27.75	602	3.48	34.85	600	3.50	34.85	27.74
767	3.22	34.83	800	3.20	34.83	27.75	798	3.45	34.88	800	3.45	34.88	27.76
959	3.29	34.84	1,000	3.30	34.84	27.75	993	3.37	34.87	1,000	3.35	34.87	27.77
1,455	3.25	34.86	1,500	3.25	34.86	27.77	1,494	3.22	34.86	1,500	3.20	34.86	27.78
1,961	3.25	34.91	2,000	3.25	34.91	27.81	2,000	3.38	34.895	2,000	3.35	34.89	27.78
2,474	2.73	34.91	2,500	2.70	34.91	27.86	2,546	3.12	34.90	2,500	3.15	34.90	27.81
Station 6025; July 16; latitude 55°30.5' N., longitude 52°20' W.; depth 3,200 m.; dynamic height 1,454.619.						Station 6029; July 17; latitude 57°01.5' N., longitude 49°22' W.; depth 3,612 m.; dynamic height 1,454.617.							
0	7.41	34.20	0	7.41	34.20	26.75	0	7.45	34.62	0	7.45	34.62	27.08
26	3.81	34.43	25	3.90	34.42	27.36	25	7.13	34.62	25	7.13	34.62	27.13
52	3.31	34.62	50	3.35	34.60	27.55	50	5.45	34.66	50	5.45	34.66	27.37
78	3.18	34.71	75	3.20	34.70	27.65	75	3.47	34.62	75	3.47	34.62	27.56
105	3.08	34.74	100	3.10	34.73	27.68	101	3.20	34.76	100	3.20	34.76	27.70
156	3.15	34.76	150	3.15	34.76	27.70	151	3.33	34.80	150	3.35	34.80	27.71
208	3.11	34.77	200	3.10	34.77	27.71	201	3.34	34.82	200	3.35	34.82	27.73
313	3.23	34.80	300	3.20	34.79	27.72	302	3.42	34.84	300	3.40	34.84	27.74
431	3.20	34.82	400	3.20	34.82	27.75	403	3.44	34.85	400	3.45	34.85	27.74
642	3.24	34.83	600	3.25	34.83	27.75	602	3.48	34.85	600	3.50	34.85	27.74
853	3.17	34.83	800	3.20	34.83	27.75	798	3.45	34.88	800	3.45	34.88	27.76
1,061	3.33	34.84	1,000	3.30	34.84	27.75	993	3.37	34.87	1,000	3.35	34.87	27.77
1,593	3.27	34.86	1,500	3.30	34.86	27.77	1,494	3.22	34.86	1,500	3.20	34.86	27.78
2,129	3.26	34.92	2,000	3.25	34.91	27.81	2,000	3.38	34.895	2,000	3.35	34.89	27.78
							2,546	3.12	34.90	2,500	3.15	34.90	27.81
							3,053	2.71	34.93	3,000	2.75	34.93	27.87
							3,562	1.74	34.89	3,500	1.95	34.90	27.92

Table of Oceanographic Data—Continued

STATIONS OCCUPIED IN 1955—Continued

Observed values			Scaled values				Observed values			Scaled values			
Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t	Depth, meters	Temperature, °C.	Salinity, ‰	Depth, meters	Temperature, °C.	Salinity, ‰	σ_t
Station 6029; July 17; latitude 57°35' N., longitude 48°16' W.; depth 3,429 m.; dynamic height 1,454.611.							Station 6032; July 18; latitude 58°59.5' N., longitude 45°19' W. depth 2,345 m. dynamic height 1454.608.						
0	6.86	34.65	0	6.86	34.65	27.18	0	6.29	34.64	0	6.29	34.64	27.25
25	6.39	34.64	25	6.39	34.64	27.23	25	6.29	34.70	25	6.29	34.70	27.30
50	3.89	34.73	50	3.89	34.73	27.60	51	4.48	34.77	50	4.50	34.77	27.57
75	3.42	34.80	75	3.42	34.80	27.71	76	3.83	34.77	75	3.85	34.77	27.64
100	3.43	34.82	100	3.43	34.82	27.72	101	3.58	34.78	100	3.60	34.78	27.67
150	3.42	34.83	150	3.42	34.83	27.72	151	3.93	34.85	150	3.95	31.85	27.69
199	3.41		200	3.40	34.83	27.73	202	3.66	34.82	200	3.65	31.82	27.70
299	3.26	34.81	300	3.25	34.81	27.73	303	3.72	34.88	300	3.70	44.88	27.74
377	3.15	34.82	400	3.15	34.82	27.75	396	3.66	34.88	400	3.65	34.88	27.74
565	3.23	34.83	600	3.25	34.83	27.74	592	3.47	34.86	600	3.45	34.86	27.75
754	3.23	34.83	800	3.25	34.83	27.74	786	3.47	34.85	800	3.45	34.86	27.75
942	3.32		1,000	3.30	34.84	27.75	978	3.47	34.89	1,000	3.45	34.89	27.77
1,430	3.25	34.865	1,500	3.25	34.87	27.78	1,478	3.38	34.905	1,500	3.35	34.90	27.79
1,927	3.32	34.89	2,000	3.30	34.89	27.79	1,982	2.94	34.905	2,000	2.90	34.90	27.84
2,547	3.11	34.91	2,500	3.15	34.91	27.82	2,294	2.40	34.88				
3,046	2.53	34.90	3,000	2.60	34.90	27.86							
3,450	1.50	34.86											
Station 6030; July 18; latitude 58°10' N., longitude 47°08' W.; depth 3,109 m.; dynamic height, 1454.629.							Station 6033; July 18; latitude 59°09' N., longitude 44°56' W.; depth 2,083 m.; dynamic height 1454.669.						
0	6.33	34.68	0	6.33	34.68	27.27	0	3.56	33.28	0	3.56	33.28	26.48
26	6.24	34.68	25	6.25	34.68	27.28	24	4.92	33.63	25	5.00	33.70	26.67
52	5.40	34.70	50	5.50	34.70	27.40	47	6.27	34.80	50	6.25	34.82	27.40
78	4.67	34.76	75	4.75	34.75	27.53	71	6.28	34.915	75	6.15	34.92	27.49
105	4.02	34.82	100	4.15	34.81	27.61	94	5.74	34.91	100	5.60	34.91	27.55
156	3.98	34.86	150	4.00	34.86	27.70	141	5.02	34.89	150	5.00	34.89	27.61
208	3.86	34.87	200	3.90	34.87	27.72	188	4.83	34.93	200	4.80	34.93	27.66
313	3.76	34.88	300	3.75	34.87	27.73	282	4.58	34.93	300	4.55	34.93	27.69
394	3.73	34.87	400	3.75	34.87	27.73	283	4.62	34.925	400	4.25	34.92	27.72
597	3.59	34.86	600	3.60	34.86	27.74	451	4.14	34.91	600	3.95	34.89	27.72
804	3.52	34.86	800	3.50	34.86	27.75	636	3.92	34.885	860	3.80	34.90	27.75
1,014	3.45	34.86	1,000	3.45	34.86	27.75	838	3.76	34.90	1,000	3.65	34.90	27.76
1,510	3.40	34.89	1,500	3.40	34.89	27.78	1,308	3.46	34.91	1,500	3.30	34.91	27.81
1,997	3.23	34.90	2,000	3.25	34.90	27.80	1,708	3.07	34.905				
2,591	2.74	34.90	2,500	2.85	34.90	27.84							
3,113	1.55	34.83	3,000	2.00	34.86	27.88							
Station 6031; July 18; latitude 58°39' N., longitude 46°08' W., depth 2,469 m.; dynamic height 1454.608.							Station 6034; July 18; latitude 59°27' N., longitude 44°25' W.; depth 1,160 m.; dynamic height 1454.756.						
0	6.16	34.70	0	6.16	34.70	27.32	0	0.48	32.86	0	0.48	32.86	26.38
25	6.15	34.72	25	6.15	34.72	27.34	18	0.81	33.30	25	1.95	33.68	26.94
51	4.71	34.77	50	4.75	34.77	27.55	35	4.00	34.21	50	4.30	34.33	27.24
76	5.00	34.96	75	5.00	34.96	27.67	53	4.32	34.35	75	4.65	34.46	27.31
102	4.89	34.96	100	4.90	34.96	27.68	70	4.72	34.44	100	4.20	34.63	27.49
152	4.54	34.94	150	4.55	34.94	27.70	106	4.16	34.65	150	4.55	34.69	27.52
202	4.25	34.91	200	4.25	34.91	27.71	141	4.30	34.68	200	4.65	34.76	27.55
304	4.01	34.915	300	4.00	34.91	27.74	211	4.69	34.77	300	4.90	34.84	27.58
416	3.57	34.86	400	3.60	34.87	27.75	422	4.98	34.89	400	5.00	34.88	27.60
623	3.43	34.845	600	3.45	34.85	27.74	628	4.75	34.90	600	4.80	34.90	27.64
829	3.40	34.85	800	3.40	34.85	27.75	831	4.23	34.92	800	4.20	34.92	27.73
1,034	3.32	34.86	1,000	3.35	34.86	27.76	1,048	4.04	34.905	1,000	4.05	34.91	27.73
1,565	3.33	34.905	1,500	3.35	34.90	27.79							
2,104	2.78	34.905	2,000	2.95	34.90	27.83							
2,521	2.04	34.86	2,500	2.10	34.87	27.88							
Station 6035; July 18; latitude 59°32' N., longitude 44°10' W.; depth 178 m.; dynamic height 1454.785.							Station 6036; July 18; latitude 59°35.5' N., longitude 44°03' W.; depth 153 m.; dynamic height 1454.775.						
0	-0.29	32.48	0	-0.29	32.48	26.10	0	-0.17	32.48	0	-0.17	32.48	26.11
25	-0.50	32.81	25	-0.50	32.81	26.39	26	0.47	33.27	25	0.40	33.24	26.69
48	3.22	34.18	50	3.20	34.19	27.24	52	2.74	34.18	50	2.70	34.13	27.23
73	2.57	34.26	75	2.60	34.27	27.36	79	2.30	34.26	75	2.35	34.25	27.36
97	2.79	34.32	100	2.85	34.35	27.40	105	2.76	34.36	100	2.65	34.34	27.41
146	4.02	34.60	(150)	4.15	34.63	27.49	145	3.71	34.50	(150)	3.85	34.52	27.44

In the following table the potential density is represented by σ_{tg} which signifies 1000 (density-1) at atmospheric pressure and potential temperature t_θ . The concentration of total phosphorus is given in microgram-atoms per liter.

TOTAL PHOSPHORUS DATA COLLECTED IN 1955

Depth, meters	σ_{tg}	Total P $\mu\text{ga/L}$	Depth, meters	σ_{tg}	Total P $\mu\text{ga/L}$	Depth, meters	σ_{tg}	Total P $\mu\text{ga/L}$	Depth, meters	σ_{tg}	Total P $\mu\text{ga/L}$
Station 6014; July 15; latitude 53°43' N., longitude 55°46' W.; depth 126 m.						Station 6021; July 15; latitude 54°51' N., longitude 53°35' W.; depth 699 m.					
0	21.80	0.74	77	26.52	1.03	0	26.61	0.30	151	27.57	0.96
26	25.91	0.69	103	26.53	1.18	25	26.93	0.39	302	27.70	1.00
51	26.46	0.98				50	27.25	0.76	318	27.69	1.04
Station 6015; July 15; latitude 53°49' N., longitude 55°31' W.; depth 214 m.						76	27.43	0.95	504	27.72	0.95
0	24.63	0.50	99	26.60	1.08	101	27.47	0.94			
25	25.82	0.62	149	26.76	1.07	Station 6022; July 15; latitude 54°57' N., longitude 53°22' W.; depth 1,558 m.					
50	26.43	1.09	189	26.99	0.99	0	26.87	0.35	306	27.71	1.03
75	26.52	1.05				26	27.00	0.45	399	27.73	1.04
Station 6016; July 15; latitude 53°53.5' N., longitude 55°25' W.; depth 172 m.						51	27.30	0.55	595	27.74	1.03
0	25.20	0.46	76	26.60	0.92	77	27.51	0.78	788	27.74	1.06
25	25.72	0.47	101	26.71	1.01	102	27.62	0.97	988	27.77	1.07
51	26.51	0.98	152	27.07	1.06	153	27.66	0.98	1,480	27.77	1.08
Station 6017; July 15; latitude 54°06' N., longitude 55°06' W.; depth 169 m.						204	27.69	1.03			
0	25.00	0.71	75	26.65	1.00	Station 6023; July 15-16; latitude 55°01.5' N., longitude 53°09' W.; depth 2,103 m.					
25	26.12	0.92	101	26.80	1.03	0	27.06	0.47	302	27.74	1.03
50	26.51	0.97	151	27.06	1.12	25	27.29	0.56	357	27.75	0.92
Station 6018; July 15; latitude 54°13' N., longitude 54°52' W.; depth 187 m.						50	27.59	0.91	532	27.75	1.04
0	24.92	0.52	73	26.67	1.09	76	27.66	0.98	705	27.76	1.05
24	25.85	0.63	97	26.78	0.96	101	27.68	1.02	890	27.77	0.97
48	26.52	1.24	145	26.99	0.99	151	27.68	1.04	1,368	27.80	1.05
Station 6019; July 15; latitude 54°29' N., longitude 54°23' W.; depth 224 m.						201	27.72	1.00	1,862	27.83	0.97
0	26.05	0.49	98	27.00	0.90	Station 6024; July 16; latitude 55°11.5' N., longitude 52°51' W.; depth 2,985 m.					
25	26.45	0.54	147	27.31	0.95	0	26.81	0.40	382	27.75	1.03
49	26.76	0.96	196	27.32	1.00	26	27.11	0.64	574	27.76	1.05
74	26.89	0.93				52	27.55	0.88	767	27.75	1.06
Station 6020; July 15; latitude 54°46' N., longitude 53°50' W.; depth 333 m.						78	27.68	1.00	959	27.76	1.06
0	26.54	0.63	93	27.28	0.95	103	27.70	0.95	1,455	27.78	1.08
23	26.80	0.38	140	27.45	0.95	154	27.70	1.06	1,961	27.83	1.09
47	26.99	0.44	187	27.54	0.97	206	27.70	1.05	2,474	27.88	0.99
70	27.21	0.58	280	27.61	0.95	309	27.74	1.08			
						Station 6025; July 16; latitude 55°30.5' N., longitude 52°20' W.; depth 3,200 m.					
						0	26.75	0.41	313	27.72	1.08
						26	27.37	0.98	431	27.75	1.10
						52	27.57	1.08	642	27.75	1.05
						78	27.66	1.08	833	27.76	1.15
						105	27.69	1.08	1,061	27.75	1.11
						156	27.70	1.13	1,593	27.78	1.16
						208	27.71	1.09	2,129	27.84	1.09

TOTAL PHOSPHORUS DATA COLLECTED IN 1955—Continued

Depth, meters	σ_t	Total P $\mu\text{g}/L$	Depth, meters	σ_t	Total P $\mu\text{g}/L$	Depth, meters	σ_t	Total P $\mu\text{g}/L$	Depth, meters	σ_t	Total P $\mu\text{g}/L$
Station 6026; July 16; latitude 55°55' N., longitude 51°38' W.; depth 3,402 m.						Station 6031; July 18; latitude 58°39' N., longitude 46°08' W.; depth 2,469 m.					
0	27.02	0.88	548	27.75	1.13	0	27.32	0.83	416	27.74	1.06
25	27.03	0.68	733		1.13	25	27.34	0.81	623	27.75	1.05
50	27.44	0.96	918	27.74	1.14	51	27.55	0.97	829	27.75	1.16
75	27.59	1.08	1,392	27.78	1.09	76	27.67	1.05	1,034	27.77	1.06
100	27.62	1.03	1,875	27.79	1.12	102	27.68	1.05	1,565	27.81	1.08
150	27.64	1.09	2,561	27.85	1.11	152	27.70	1.03	2,104	27.86	1.04
199	27.69	1.10	3,064	27.89	1.06	202	27.71	1.05	2,521	27.89	0.95
299	27.74	1.05	3,421	27.93	0.98	304	27.74	1.07			
365	27.74	1.08									
Station 6027; July 17; latitude 56°28.5' N., longitude 50°30' W.; depth 3,566 m.						Station 6032; July 18; latitude 58°59.5' N., longitude 45°19' W.; depth 2,345 m.					
0	26.99	0.58	603	27.74	1.07	0	27.25	0.80	396	27.74	0.97
24	26.99	0.61	799	27.75	1.09	25	27.30	0.83	592	27.75	1.11
48	27.39	0.92	904	27.76	1.05	51	27.57	1.04	786	27.75	1.10
72	27.46	0.99	1,491	27.79	1.04	76	27.64	1.12	978	27.78	1.15
96	27.53	1.01	1,990	27.79	1.07	101	27.67	1.14	1,478	27.80	1.14
145	27.58	1.09	2,476	27.83	1.04	151	27.69	1.08	1,982	27.85	1.13
193	27.62	1.08	2,976	27.85	0.96	202	27.70	1.07	2,294	27.88	1.08
289	27.70	1.11	3,482	27.89	0.99	303	27.74	1.11			
404	27.74	1.06									
Station 6028; July 17; latitude 57°01.5' N., longitude 49°22' W.; depth 3,612 m.						Station 6033; July 18; latitude 59°09' N., longitude 44°56' W.; depth 2,083 m.					
0	27.08	0.63	602	27.74	1.12	0	26.47	0.93	282	27.69	1.09
25	27.12	0.64	798	27.77	1.16	24	26.62	0.86	283	27.68	1.08
50	27.37	0.87	993	27.78	1.15	47	27.38	0.93	451	27.72	1.10
75	27.56	1.06	1,494	27.79	1.09	71	27.47	0.96	636	27.73	1.13
101	27.70	1.08	2,000	27.80	1.10	94	27.54	0.99	838	27.76	1.10
151	27.71	1.06	2,546	27.84	1.06	141	27.61	1.05	1,308	27.80	1.14
201	27.73	1.08	3,053	27.89	1.00	188	27.66	1.16	1,708	27.84	1.10
302	27.74	1.11	3,562	27.94	0.97						
403	27.74	1.08									
Station 6029; July 17; latitude 57°35' N., longitude 48°16' W.; depth 3,429 m.						Station 6034; July 18; latitude 59°27' N., longitude 44°25' W.; depth 1,160 m.					
0	27.18	0.65	377	27.75	1.03	0	26.38	0.77	141	27.52	0.93
25	27.23	0.75	565	27.75	1.08	18	26.71	0.85	211	27.55	0.96
50	27.60	1.04	754	27.75	1.04	35	27.18	0.85	422	27.61	0.98
75	27.71	1.09	942		1.04	53	27.26	0.83	628	27.65	1.07
100	27.72	1.04	1,430	27.78	1.07	70	27.28	0.89	831	27.73	1.11
150	27.73	1.19	1,927	27.80	1.08	106	27.51	0.94	1,048	27.73	1.09
199		1.06	2,547	27.85	1.13						
299	27.73	1.06	3,046	27.89	1.06						
Station 6030; July 18; latitude 58°10' N., longitude 47°08' W.; depth 3,109 m.						Station 6035; July 18; latitude 59°32' N., longitude 44°10' W.; depth 178 m.					
0	27.28	0.86	394	27.73	1.05	0	26.10	0.67	73	27.35	0.91
26	27.29	0.90	597	27.74	1.08	25	26.39	0.74	97	27.38	0.86
52	27.41	1.17	804	27.75	1.08	48	27.23	0.87	146	27.49	0.87
78	27.54	1.17	1,014	27.76	1.16						
105	27.66	1.18	1,510	27.79	1.12						
156	27.70	1.27	1,997	27.82	1.09						
208	27.72	1.30	2,591	27.87	1.08						
313	27.73	1.12	3,113	27.90	1.05						
Station 6036; July 18; latitude 59°35.5' N., longitude 44°03' W.; depth 153 m.						0	26.10	0.73	79	27.38	0.89
						26	26.70	0.81	105	27.42	0.83
						52	27.27	0.83	145	27.44	0.99

